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Town and Country Mansions.

THE author of the book thus entitled* has had much practical experience in house planning and construction, and has combined with this a feeling for the picturesque in house-building, and a desire at least to realise it in practice, so far as to produce a better balance between the artistic and the practical sides of house building than we always find. It is too often the case that a man who is a very good sanitarian builds very ugly houses, and that the man who is professedly an "art-architect" succeeds only in putting more or less picturesque decoration on an ill-planned and inconvenient and (for all he knows to the contrary) an unhealthy dwelling. Mr. Young's book, although it is obviously intended mainly to catch the eye with nice designs executed in spirited though rather overloaded lithographs, contains in the letterpress evidence of due attention to the practical side of the matter; and, indeed, we are inclined to think, though he will not, we fear, thank us for saying so, that the practical part of his book is in reality more systematic and unimpeachable than its artistic side.

In fact, we cannot quite reconcile the opinion expressed by Mr. Young in regard to the artistic side of architecture with his practice. In some of his preliminary remarks in regard to style, &c., he is most logical and broad in his views, and shows, though with a restrained and cautious form of expression, an evident contempt for a good deal of what passes for Art and Art-furniture and Art-schools at the present day. He points out that the Gothic revival was (with its best practitioners, at any rate) really a revival of the spirit and not merely of the forms of the style, whereas the Queen Anne movement is merely copying. "This self-styled 'school' of decorators and furniture-makers are a phenomenon of the times, and yet they are not unique. They stand in the same relation to art as fanatical sectarians do to religion; they assume much if they understand little; if they have little knowledge of art they make up the deficiency by a superfluity of spurious zeal, and consider themselves specially selected as chosen vessels of art-knowledge, while they have never probed the matter below the surface." And there is more to the same purpose, showing that all this talk and enthusiasm, these fits of adoration over an ugly old chair, are the product of a state of feeling which is rather inimical than favourable to the advancement of art properly so called. With all which we are quite in accord. But why, then, when we turn to Mr. Young's illustrations, do we light, the very first thing, on a house designed in exact accordance with the habitudes of this new school of *dilettanti?* We said in our haste, "designed"; but, then, is this "design,"—this jumble of queerly-curled gables, and rusticated pilasters, and engaged columns, thrown together with little or no meaning? In this criticism we by no means intend to speak disrespectfully of the author of the book, as if he could not design, for we know (and have evidence in other illustrations in his book) that he can; but we are certainly tempted to ask why he rebukes the Queen Annists with the pen and then flatters them with the pencil? Probably this house, and others in the book, were produced at the bidding of clients who will have Queen Anne or nothing (for clients have that way with them now, and small thanks to them), but it is a great pity that these votaries of artistic fashion should have power to compel men who can do better things to work down to the level of their ill-advised and illogical fancies, and to reduce the architect to play the part indicated in the melancholy motto,—

"Video meliora, proboque;
Deteriora sequor."

If people will have these bundles of odds and ends of a corrupt style thrown together, there is, we may say, no help for the architect who has not a private fortune: *oportet vivere.* But it is nonsense to call it design, in any sense in which the word has any intellectual value; and there are other things in Mr. Young's book that are so much better than this, and are so distinctly pervaded by a true feeling for the picturesque in architecture,—the picturesque based upon plan and design,—that it is quite a pity that he put anything so ugly as these Cadogan-square houses at the very outset of his book; unless, indeed, we are to suppose that it was with a prudent desire to catch clients by setting before them something after their own heart, and showing that the author was up in the prevailing fashions of the day.

There is something to be said *pro* and *con.*, in regard to the remarks embodied in the text under the heading "Selecting a Style." We have some objection to the heading in itself, as apparently giving definite encouragement to the popular idea of the majority of clients, that it is a positive duty in the first instance, before building anything, to make up your mind to build in a particular style or manner (for the latter expression in many cases embodies much more the real truth of the matter). It is true that the author's remarks are in a great measure a correction of this prejudice, or are apparently intended to be so. "The best architect," he says, "is he who, free from prejudice, has studied the peculiarities, and communed with the genius of all styles, and who comprehends the great central art of architecture, which is neither French nor English, neither Classic nor Gothic, but all of them, and much more." And this is admirably said. But why head the chapter with a title which is in itself an essential contradiction of this sentiment? So far as the book has any influence on the mind of the average client, the result will certainly be that the said average client will be caught by the heading, and will entirely miss the philosophising under it. To get any anything into the heads of the English public in regard to architectural principles, it is necessary to state these principles in the most plain and matter-of-fact and uncompromising manner, and even then with little chance of success. But if any architect in writing about the art side of his profession expects the average reader to follow him into discriminations and critical niceties, he will be almost certainly disappointed. The only way is to tell the client, with the rigour of superior knowledge and authority, that such a view is right and such another is wrong. He may then succumb; or he may, perhaps, seek out a less uncompromising architect; experience points to the latter as the more probable result. Still, we have a great opinion that clients should be kept in order by their architects more than they are, and we suspect that in many cases, if it were decisively carried out, the client would be more obedient than a timorous architect sometimes imagines until he has tried the experiment; at all events, a man is often secretly thankful to any one who will make up for him what he calls his mind, when he cannot make it up for himself. Some of Mr. Young's observations in regard to the different way in which questions of style present themselves to persons of different habits of mind are amusing and very much to the point. As he candidly admits, the client who wants a particular style on grounds of sentiment often finds himself opposed by a contrary sentiment on the part of the architect. It is not unreasonable that he should kick against this counter sentiment, if he perceives it to be nothing but sentiment. The architect should be ready to give a reason for the faith that is in him; not necessarily "with meekness and fear," which would be too often thrown away. But the influence of habit even on the orthodox architectural mind is far stronger than it ought to be, as illustrated very aptly by the author in reference to French opinion, as contrasted with English. A French architect says of one of the best designed of modern English houses, "*C'est un Gothique affreux.*" He dislikes it because he does not understand the style, and has never learned to understand it; but a Louis Quinze design,—"*oui, c'est magnifique,*" simply because it is Louis Quinze. In which also there is instruction.

Among the designs illustrated in the book, those which partake of late Gothic and Eliza-

* Town and Country Mansions, and Suburban Houses, with Notes on the Sanitary and Artistic Construction of Houses. By William Young, Architect. London: E. & F. N. Spon. 1879.

bethan manner are the best, and (as our way of characterising them indicates) they consist less of mere reproduction of old materials, and show more originality of detail and combination than the Queen Anne designs. Perhaps the best is Holmwood House, Hants, the main view of which we think we remember in one of the Academy collections in the architectural room. The author has contrived very successfully to combine picturesque outline and grouping with suitability of plan, and with a sufficient predominance of horizontal lines to give solidity to the whole. We do not altogether reconcile the staircase design and detail with the exterior. Of course, mullioned windows are found in Elizabethan mansions, combined with internal details and fittings which have more reference to the coming Jacobean era than to the past Gothic era; Elizabethanism being the connecting link of the two. But the exterior of Mr. Young's design has decided reminiscences of Gothic, more than reminiscences, while his staircase has not a suspicion of Gothic detail in it; the distinction is greater than would be found, as far as we remember, in actual examples; but even if there were precedent for it, why not correct this obvious want of coherence in architectural manner, and render the whole design of the interior and exterior homogeneous in feeling? It is not so in fact in this case, regarded as modern work, and is hardly so even historically, if that were a matter of consequence. The plan is a very good example of convenient and, at the same time, effective arrangement. The specimens of decorative treatment of interiors, given in the book, are very pleasing in some cases, though all to our thinking more or less suffering from the fault of the day, want of repose, and over-elaboration of parts. This is, perhaps, intensified by the manner of the photo-lithographs, which we have already referred to as overloaded. It is the fashion now to get up decorative drawing of this kind with a profusion of marking and shading, which seldom comes out over-clearly in the photo-lithographic process, but which, by giving a generally full and rich effect, enables often a small amount of thought to go a long way in a drawing, shading and graining doing so much to fill up spaces and give a look of great elaboration. This is quite unnecessary in these designs, which even in execution would certainly not appear deficient in variety of detail; but the point is worth mention in regard to the general practice of architectural drawing of this kind at present. We should prefer to see more certainty of line and definition, with less of mere surface-work, which can be made to cover a multitude of sins often in a drawing which would have little to recommend it if reduced to pure form, without this "colouring up" at the hands of the draughtsman.

The practical remarks in the text of the book, arranged under the heading of the different classes of apartments, are, though brief, very much to the point, and very well written. It is only just to others who have treated of the conveniences of house-planning, to observe that there is, as far as we have noticed, no new light thrown upon the subject, beyond what is to be found in other treatises by members of the profession who have treated of house-planning in a practical spirit. Mr. Young's work, however, is obviously not intended to be in any way exhaustive in these matters, and is, we presume, rather addressed to non-professional people who may wish to gain some general knowledge on the subject of houses than to architects. The perusal of it will probably enable an intelligent client to keep a look-out on his architect to some extent, and see that he gets from him all attention to the various *desiderata* which are brought forward and commented upon. Whether that result is to be considered as an advantage or not depends, of course on the point of view from which it is regarded.

There are, however, suggestions in Mr. Young's pages which many members of the profession would do well to take into account more than they do. That "the architect should always see the site before commencing to study the plans" would seem to a rightly-constituted mind, no doubt, a truism, but we suspect it is not unfrequently neglected, and plans are sketched and then made to suit the site afterwards. It is certainly a mistake to suppose that a mere plan of the site, however accurate, will answer the purpose: did any one ever visit a site of which he had had a plan previously, without finding something about it of which the plan gave him no idea? We must, however, protest against some of the remarks under the heading of concrete; for instance, that it would be found a hazardous experiment to employ it for floors or roofs in a dwelling-house, "and most probably a complete failure." There may be question as to the material being liked for floors, but that is the only doubt about it; and it is quite certain that there can hardly be a better roof than concrete properly constructed and employed. In general, however, the practical recommendations contained in the book seem quite unimpeachable.

ROYAL ACADEMY LECTURES ON ARCHITECTURE.*

BY PROFESSOR EDWARD M. BARRY, R.A.

RECENT ARTISTIC LOSSES; THE GOTHIC REVIVAL, AND SIR GILBERT SCOTT.

And now I must turn to that other recent loss, which we, as architects, have specially to lament, in the death of Sir Gilbert Scott. It has rarely happened, I think, to any modern architect, to be in so full a manner, a representative of that which may almost be called an architectural Revolution. It is still less often the case, that such Revolutionists experience in their lifetime, so large a measure of success, as fell to the lot of our late gifted Academician.

I am not about to discuss any peculiarities of his work in detail. The time is perhaps not yet come for such an examination, nor should I be so presumptuous as to attempt it. I wish rather to notice some of the principles of the important architectural movement, with which his name is associated, and to remark in passing, on any points which may be useful to ourselves at the present time.

Sir Gilbert Scott, when filling the chair of Professor of Architecture, established many claims to your gratitude, and I have noticed, with much satisfaction, that his lectures have been lately published by his representatives, and thus laid before the great world. He was, I have always thought, remarkable as much for the candour of his judgment, as for the extent of his learning, and the depth of his convictions. Thus, speaking of the Dome, in one of his lectures, he laments that it had found no abiding place in that great system of English Mediæval architecture, to which he was devoted.

In this passage he declares, as I think most correctly, that the noblest of all forms by which a space can be covered is the dome, and that of all architectural features it is "the most sublime, and the most poetic, and is susceptible of, and demands the highest artistic treatment." Further on, he does full justice to Michelangelo's grand dome of St. Peter's, as well as to Wren's masterpiece at St. Paul's, pronouncing the latter to be the most successful, as regards external appearance, in the world. His remarks as to the internal treatment of this crowning achievement of Renaissance architecture, have a special interest, at the present time, when it is understood that a renewed attempt is to be made to induce some of our best painters to devote themselves to the glorious task of decorating the dome of St. Paul's.

Sir Gilbert Scott, alluding to such an application of painting, declares that "the dome, without its appropriate decorations, is but the body without the soul. It is the sister art of painting which breathes life into the otherwise breathless form. Such painting must, however," he adds, "be adapted to its position with skill, knowledge, and study." Painters must remember that the dome possesses "an essential form, on which its very stability, real or apparent, depends. They must, therefore, keep their art in subordination, so as not to disturb that essential; but rather to bring out and emphasise it"; otherwise the application of high artistic painting to the dome "will not prove a loving union, but rather a hostile collision of the two sister arts."

Sir Gilbert Scott's devotion to Mediæval architecture is well known, and it was a cruel irony of fate which imposed upon him the task of constructing the Public Offices in a style which, though he had studied it, was not that of his matured choice. He speaks, in his lectures, of his original enthusiasm for that revival of Gothic architecture in which he took subsequently a large and successful part. At the same time, he declared his catholicity of taste, protesting against being considered narrow or one-sided, and expressing, as he said, no "stinted or cold-hearted" eulogy of the architecture of ancient Greece and Rome. Of the Greeks, he speaks as "the most wonderful in intellectual power of all the races of man. That race, inspired as it would almost seem of God, to be our instructors in literature and art, and our initiators in science, just as was another people to be the teachers of His holy religion." The Roman style, he said, had great merits. It "amplified and extended the capabilities of Classic architecture, rendering it capable of meeting every possible emergency and demand, whether of material or construction, and giving it a cosmopolitan character, suited to a people which had conquered the world, and which, if itself a race of iron, united under its world-wide sway, the brass, the silver, and the gold, of the older rulers of mankind."

Sympathising deeply with the revival of Gothic architecture, which has been one of the most remarkable events of our time, Sir Gilbert Scott was well aware, that for any revival to have a chance of permanence, it was necessary that it should rest on a rational basis. We have seen, on former occasions, how spontaneous and irresistible was the Renaissance movement in Italy. In our country it was hardly less potent, though, in accordance with the genius of the English people, the march of change was more measured and gradual. It was, however, none the less complete. Wren spoke, as we know, of Gothic as a barbarous style, and his towers at Westminster Abbey remain to testify to his imperfect appreciation of Mediæval art. His whole soul was thrown into the revival of his own day, which aimed at the adoption, more or less, of Roman forms in all our architecture, whether sacred or domestic. The "revival of letters" led the way to a revival of architecture, and the effects of the then recent Reformation had no inconsiderable share in inducing men to be ready to break with the past.

The movement towards a Classic revival was not partial or insular. It extended to all civilised nations, and although it may have been checked, it has never been stopped, and is still in progress.

There are those who, as we know, repudiate Revivals, and think by so doing to obtain originality. A vain hope! Architecture, though the first among the arts, is not free, as are her sisters of Painting and Sculpture. She has a scientific or material as well as an artistic side, and must accept limits, or fetters, if you like to call them so. She has, moreover, to regard antiquity, and must take into account that reverence for the past, which mankind in general largely entertains. She has further to be useful, as well as ornamental, and must therefore restrain her genius by the canons of common sense.

Sir Gilbert Scott was a revivalist by taste, as well as from conviction. He tells us, his "love for Gothic architecture was absolutely spontaneous," and that he then looked on Classic work, as "an alien to our race and our religion." I do not share this opinion, but we may see in the very strength of the expression, a proof of the devotion which is characteristic of an earnest artist.

The advocates of originality in architecture will, however, return to the charge. "Why," they will say, "have Revivals at all?" Architecture used to be progressive, changes arose indeed naturally, as blossoms succeed buds, but such violent revulsions of public taste as the Classic Renaissance on the one hand, and the Gothic Revival on the other, are modern portents.

The only answer that can be given, is that circumstances are changed. We can never be as our forefathers were. The time is past when men agreed to receive their policy, their religion, their architecture, from others. The "revival of letters" was an outburst of freedom, and if we will have liberty, we must accept its drawbacks.

Let us consider for a moment how such liberty has worked in the architectural history of our country, from Mediæval times.

In the Gothic architecture of England, we may easily trace the progress spoken of by these objectors, up to a certain point. Then it ceases, a retrogression begins, and, ultimately, the Renaissance appears, involving an abrupt break with tradition. We have seen how the Saxon style gave way to the Norman, and also how the so-called Early English and Decorated varieties continued the onward movement. At last, in the Perpendicular and Tudor periods, signs of faltering energy became apparent. The

* First Lecture. See p. 115, *ante*.

increase of appliances for domestic comfort gave an impetus to changes of form, in the direction of the trabeated or horizontal principle; while a superfluity of ornament evidenced the decay of the great principle of noble architecture, decorated construction, as opposed to constructed decoration.

The old forms were soon to be discarded, together with the decoration which had, more or less, corrupted them. They took refuge for a time in the architecture which we call Elizabethan, or Jacobean, but which is, in truth, Transitional, and had not time enough allowed to it, for being formulated as a regular style. Mediæval art seemed to have run its course, and to be about to expire, when the Classical revival of Inigo Jones and Wren arose to bid it disappear.

Why was the change welcomed? The new literary enthusiasm had perhaps the first place among the factors of change; but must there not also have been other causes at work? More elaborate requirements called, it may be, for more complex arrangements, and for these the old Mediæval architecture might be deemed unfit. The necessities of modern life may have seemed opposed to Mediæval feelings and traditions, and thus a change, which was almost a Revolution, may have come to be hailed with satisfaction, and even with enthusiasm.

Whether, if the new love for the history and literature of Greece and Rome had not arisen when it did, it would have been possible to develope from the Tudor and Elizabethan architecture of England a style which would have sufficed for modern wants, is a problem which has never been solved. It is, I think, matter for regret that this is so. Our English Transitional designs have many merits, and possess, as it seems to me, much capacity for improvement.

The leaders of the great Gothic Revival, with which Sir Gilbert Scott was connected, took a less hopeful view. They looked further backwards to Mediæval works alone, and seemed to regard the past as a garden, from which flowers might be culled at random, adopting one Gothic style or another, as individual taste dictated. I do not mean to discuss now the advantages or the drawbacks of such a course; but it is evident that a Revival pursued in such a manner is not a development, but an eclectic adoption of certain phases of an old order of things.

The Renaissance revivalists were somewhat stricter, possibly because they had a less wealth of material on which to exercise their choice. The Romans adopted Greek architecture as a whole, while adding to it the arch, with all its far-reaching consequences. The introduction of the arch was, to a great extent, an engineering expedient. It gave power, freedom, and variety to the graceful, if somewhat monotonous, forms of ancient Greece. The latter were used by the Romans for frontispieces, as in the application of porticos, with horizontal entablatures, to buildings in which the arch predominated. The beam and the arch thus co-operated in a friendly rivalry, and that they can so co-exist, is one of the claims of Classical art on our approval to-day.

Wren, the great master of the English Renaissance, availed himself of the liberty thus accorded to him. Inigo Jones, in his new portico to S. Paul's, exhibited a trabeated construction, and in the executed fragment of his design for Whitehall the arch finds no place. Wren, however, used the arch with readiness, and adopted its noblest exemplification as the crowning feature of his greatest work.

The Mediæval architects had found out, long before the Renaissance, that the severity of the pointed arch involved them in difficulties, particularly in domestic work. The segmental form and the four-centred depressed arch, were the expedients adopted by them to overcome the inconveniences which made themselves felt; but although by such methods increased plasticity was obtained, it may be doubted if it was not too dearly purchased, and Mediæval art has never, at any rate, felt itself able to accept the joint services of beam and arch with the same alacrity that was displayed by the Renaissance architects.

When we consider the progress of the Renaissance movement, and observe how, starting from Italy, it penetrated into all countries, establishing itself everywhere, with more or less success, it is impossible to avoid the conclusion that there must have been some potent reason of general convenience underlying so remarkable a propaganda. In this country, after the new method had taken root, it needed a new revival to obtain even a hearing for the claims of the old Mediæval art.

It appears strange to us that, with such vast stores of Mediæval artistic beauty as England possesses, such a state of things should have been possible. We may have our individual predilections for either of the rival schools, but it may almost seem to us a thing incredible, that Wren, for example, should find nothing to admire in Westminster Abbey.

It was, perhaps, from the artistic deficiency exemplified by such an instance, that the revived Classical architecture in England ceased to advance, and then became neglected. It had, indeed, been, to a great extent, imposed from above. The king and court were the first patrons of the new order of things, and the revival, therefore, lacked spontaneity.

Then came, in process of time, tastes for Egyptian art, and imitation of Greek temples, with little real feeling, and still less power to adapt, rather than copy, with a blind subservience, forms which are unfitted for our wants, and unsuitable to our climate. Such reproductions could not commend themselves to the practical conclusions of our countrymen; and they served therefore, as episodes only, in the architectural history of the day.

The impetus of the Classical revival was well nigh spent, and the age of no-architecture appeared to be at hand. Houses without taste, and churches in decay, abounded, in what may be called,—*The Dismal period*,—the period of Bloomsbury streets, and Batty Langley's Gothic.

It was then that the important movement arose, in the later phases of which, Sir Gilbert Scott was destined to take the foremost place. Horace Walpole had played with Gothic at Strawberry Hill, and Sir W. Scott had entranced a nation (already, alas! half forgetful of him) by the creations of his genius, which turned men's thoughts to the habits, customs, and architecture of olden times.

Sir Gilbert Scott has himself told us, however, that these things did not move him, and that his love for Gothic art arose independently, and with an unconscious will. We are all of us, nevertheless, so much influenced by associations, that it is difficult for any one to assert an absolute independence, and it may well be that he was drawn on, like others, by unseen influences.

A revival, if it be more than a passing fancy for a new plaything, must be called for by some new want to be supplied, or by some deficiencies to be atoned for. At the time of the Gothic revival, both these conditions were present.

In the first place, a craving had arisen for something better than the then prevailing dreary bareness of churches, public buildings, and houses. Men began to turn to art as a civiliser and teacher; a revived earnestness in religion brought new forces into play, and everything became ripe for an architectural revival.

The new desire for something superior to the architecture of Baker-street had already shown itself in such monuments as St. George's Hall, Liverpool, the Royal Exchange, the clubs in Pall-mall, and important buildings for City companies, banking, and other associations, in London and elsewhere. Thus far, the idea had been to take up the work of Inigo Jones and Wren; to purify it by the refining influence of Greek art, and, in this way, to carry on the Renaissance to a successful development.

The movement has never stopped. A time came, however, when it was checked. This was the period of the Gothic revival.

I have spoken of deficiencies, to be made good. An age of ecclesiastical neglect had allowed our cathedrals and churches to fall into decay, and there was ample room for the energy of one of the leaders of the revival, the Cambridge Camden Society, with its suggestive motto, "*Donec templa refeceris*."

A nation so conservative in its instincts as the English could not long tolerate the sight of churches closed for want of repairs, and cathedrals walled up, and divided, because avoided, and disused. A cry was therefore raised for the building of new churches, and for the repair and restoration of old ones. A strong ecclesiastical movement revived an interest in the fabrics, while it pressed earnestly for consideration of the spiritual necessities of the Church.

Sir Gilbert Scott soon became identified with the Gothic revival, and one of the best known of his early works, which brought him fame and reputation, is the parish church of St. Giles, Camberwell.

In the competitions at Hamburg, he further proved that English architects feared no foreign rivals, and could encounter them, in their own country, with success. The noble church, erected as the result of one of these competitions, is among the most important works, wholly designed by Sir Gilbert Scott, and was, I believe, so considered by himself.

The Gothic movement would scarcely have advanced as rapidly as it did, if it had not been for the choice of Gothic architecture for the rebuilding of the Houses of Parliament. For this work, it became necessary to train workmen for the various departments of stone and wood carving, encaustic tiles, decoration, metal work, &c. Of the leaders in such teaching, none can compare with Augustus Welby Pugin, who lent his willing co-operation to the architect of the building, my father, Sir Charles Barry.

To educate workmen in Gothic principles of work, collections of casts and specimens were made, and Sir Gilbert Scott became one of the first and warmest supporters of the Architectural Museum at Westminster, an institution established with this object.

The influence exerted by Pugin and his followers made itself felt in all the subsidiary pursuits which are allied to architectural design, and thus it became possible for architects to ensure the due execution of their ideas, in the style now coming into use.

Gothic churches multiplied, cathedrals were repaired and restored, and became once more thronged with overflowing congregations. The old neglect had passed away under the energetic impulse of, it may be, a too indiscriminating zeal for newness, under the name of Restoration.

Architecture was again enlisted in the service of the church, and many a fierce controversy about Ritual arose from the connexion. The days of barn-like churches were over, and whitewashed interiors were no longer considered a necessarily Protestant institution. The duty was everywhere preached of building our churches in all the "beauty of holiness."

The taste for Mediæval architecture was thus warmly encouraged by the clergy, who looked upon themselves as the guardians of our sacred buildings, and were active promoters of a Revival which they were able to make ancillary to their own views of ecclesiastical polity.

In secular work, the new taste also prevailed, although not so strongly. Banks, town-halls, law courts, and other important buildings were erected in one of the Gothic varieties of style; although for such purposes, the Renaissance was still often employed, as, indeed, it is at the present time, when signs may perhaps be detected of an increasing feeling in favour of Classic architecture or some modifications of it.

In adapting the revived Gothic for such buildings as I have mentioned, certain inconveniences were felt, and increased elasticity came to be desired. Some of our architects have sought to attain these ends by mixing Italian and French peculiarities of detail with those which are purely English. The employment of large shafts in columns, and the partial abandonment of moulded, for plate tracery, date from this period. Sir Gilbert Scott did not, however, accept with any readiness such a modification of the revival movement. To him it was a national effort to revive the English forms of Mediæval architecture. We may see traces of admixture of the foreign element in certain of his church fittings, but in his more important designs for buildings (always excepting the Albert Memorial in Hyde Park), he remained, as he began, emphatically an English architect. At the time of his death, Gothic architecture had become completely accepted as the Ecclesiastical style, while, for other buildings, no final decision can be said to have yet met with general consent.

Sir Gilbert Scott was, neither by taste nor temperament, an innovator. He wished to restore, in architecture, the ancient ways, with due regard to the different circumstances of modern life. In the conduct of a great movement, there is room for diversities of character, and enthusiasm will sometimes lead to extravagance. The Gothic Revival, and the so-called Tractarian movement went on together, hand in hand, with mutual help and sympathy; but Sir Gilbert Scott was too earnest a champion to wish his cause to be identified with any single party. In his works we may see evidences of sobriety of taste, and calmness of judgment, such as distinguished many of the High Churchmen of the day, as, for example, the late Dean of Chichester. To such minds, the Revival was welcome, as long as it did not go too far, and

bethan manner are the best, and (as our way of characterising them indicates) they consist less of mere reproduction of old materials, and show more originality of detail and combination than the Queen Anne designs. Perhaps the best is Holmwood House, Hants, the main view of which we think we remember in one of the Academy collections in the architectural room. The author has contrived very successfully to combine picturesque outline and grouping with suitability of plan, and with a sufficient predominance of horizontal lines to give solidity to the whole. We do not altogether reconcile the staircase design and detail with the exterior. Of course, mullioned windows are found in Elizabethan mansions, combined with internal details and fittings which have more reference to the coming Jacobean era than to the past Gothic era; Elizabethanism being the connecting link of the two. But the exterior of Mr. Young's design has decided reminiscences of Gothic, more than reminiscences, while his staircase has not a suspicion of Gothic detail in it; the distinction is greater than would be found, as far as we remember, in actual examples; but even if there were precedent for it, why not correct this obvious want of coherence in architectural manner, and render the whole design of the interior and exterior homogeneous in feeling? It is not so in fact in this case, regarded as modern work, and is hardly so even historically, if that were a matter of consequence. The plan is a very good example of convenient and, at the same time, effective arrangement. The specimens of decorative treatment of interiors, given in the book, are very pleasing in some cases, though all to our thinking more or less suffering from the fault of the day, want of repose, and over-elaboration of parts. This is, perhaps, intensified by the manner of the photo-lithographs, which we have already referred to as overloaded. It is the fashion now to get up decorative drawing of this kind with a profusion of marking and shading, which seldom comes out over-clearly in the photo-lithographic process, but which, by giving a generally full and rich effect, enables often a small amount of thought to go a long way in a drawing, shading and graining doing so much to fill up spaces and give a look of great elaboration. This is quite unnecessary in these designs, which even in execution would certainly not appear deficient in variety of detail; but the point is worth mention in regard to the general practice of architectural drawing of this kind at present. We should prefer to see more certainty of line and definition, with less of mere surface-work, which can be made to cover a multitude of sins often in a drawing which would have little to recommend it if reduced to pure form, without this "colouring up" at the hands of the draughtsman.

The practical remarks in the text of the book, arranged under the heading of the different classes of apartments, are, though brief, very much to the point, and very well written. It is only just to others who have treated of the conveniences of house-planning, to observe that there is, as far as we have noticed, no new light thrown upon the subject, beyond what is to be found in other treatises by members of the profession who have treated of house-planning in a practical spirit. Mr. Young's work, however, is obviously not intended to be in any way exhaustive in these matters, and is, we presume, rather addressed to non-professional people who may wish to gain some general knowledge on the subject of houses than to architects. The perusal of it will probably enable an intelligent client to keep a look-out on his architect to some extent, and see that he gets from him all attention to the various *desiderata* which are brought forward and commented upon. Whether that result is to be considered as an advantage or not depends, of course on the point of view from which it is regarded.

There are, however, suggestions in Mr. Young's pages which many members of the profession would do well to take into account more than they do. That "the architect should always see the site before commencing to study the plans" would seem to a rightly-constituted mind, no doubt, a truism, but we suspect it is not unfrequently neglected, and plans are sketched and then made to suit the site afterwards. It is certainly a mistake to suppose that a mere plan of the site, however accurate, will answer the purpose: did any one ever visit a site of which he had had a plan previously, without finding something about it of which the plan gave him no idea? We must, however, protest against some of the remarks under the heading of concrete; for instance, that it would be found a hazardous experiment to employ it for floors or roofs in a dwelling-house, "and most probably a complete failure." There may be question as to the material being liked for floors, but that is the only doubt about it; and it is quite certain that there can hardly be a better roof than concrete properly constructed and employed. In general, however, the practical recommendations contained in the book seem quite unimpeachable.

ROYAL ACADEMY LECTURES ON ARCHITECTURE.*

BY PROFESSOR EDWARD M. BARRY, R.A.

RECENT ARTISTIC LOSSES; THE GOTHIC REVIVAL, AND SIR GILBERT SCOTT.

And now I must turn to that other recent loss, which we, as architects, have specially to lament, in the death of Sir Gilbert Scott. It has rarely happened, I think, to any modern architect, to be in so full a manner, a representative of that which may almost be called an architectural Revolution. It is still less often the case, that such Revolutionists experience in their lifetime, so large a measure of success, as fell to the lot of our late gifted Academician.

I am not about to discuss any peculiarities of his work in detail. The time is perhaps not yet come for such an examination, nor should I be so presumptuous as to attempt it. I wish rather to notice some of the principles of the important architectural movement, with which his name is associated, and to remark in passing, on any points which may be useful to ourselves at the present time.

Sir Gilbert Scott, when filling the chair of Professor of Architecture, established many claims to your gratitude, and I have noticed, with much satisfaction, that his lectures have been lately published by his representatives, and thus laid before the great world. He was, I have always thought, remarkable as much for the candour of his judgment, as for the extent of his learning, and the depth of his convictions. Thus, speaking of the Dome, in one of his lectures, he laments that it had found no abiding place in that great system of English Mediæval architecture, to which he was devoted.

In this passage he declares, as I think most correctly, that the noblest of all forms by which a space can be covered is the dome, and that of all architectural features it is "the most sublime, and the most poetic, and is susceptible of, and demands the highest artistic treatment." Further on, he does full justice to Michelangelo's grand dome of St. Peter's, as well as to Wren's masterpiece at St. Paul's, pronouncing the latter to be the most successful, as regards external appearance, in the world. His remarks as to the internal treatment of this crowning achievement of Renaissance architecture, have a special interest, at the present time, when it is understood that a renewed attempt is to be made to induce some of our best painters to devote themselves to the glorious task of decorating the dome of St. Paul's.

Sir Gilbert Scott, alluding to such an application of painting, declares that "the dome, without its appropriate decorations, is but the body without the soul. It is the sister art of painting which breathes life into the otherwise breathless form. Such painting must, however," he adds, "be adapted to its position with skill, knowledge, and study." Painters must remember that the dome possesses "an essential form, on which its very stability, real or apparent, depends. They must, therefore, keep their art in subordination, so as not to disturb that essential; but rather to bring out and emphasise it"; otherwise the application of high artistic painting to the dome "will not prove a loving union, but rather a hostile collision of the two sister arts."

Sir Gilbert Scott's devotion to Mediæval architecture is well known, and it was a cruel irony of fate which imposed upon him the task of constructing the Public Offices in a style which, though he had studied it, was not that of his matured choice. He speaks, in his lectures, of his original enthusiasm for that revival of Gothic architectnre in which he took subsequently a large and successful part. At the same time, he declared his catholicity of taste, protesting against being considered narrow or one-sided, and expressing, as he said, no "stinted or cold-hearted" eulogy of the architecture of ancient Greece and Rome. Of the Greeks, he speaks as "the most wonderful in intellectual power of all the races of man. That race, inspired as it would almost seem of God, to be our instructors in literature and art, and our initiators in science, just as was another people to be the teachers of His holy religion." The Roman style, he said, had great merits. It "amplified and extended the capabilities of Classic architecture, rendering it capable of meeting every possible emergency and demand, whether of material or construction, and giving it a cosmopolitan character, suited to a people which had conquered the world, and which, if itself a race of iron, united under its world-wide sway, the brass, the silver, and the gold, of the older rulers of mankind."

Sympathising deeply with the revival of Gothic architecture, which has been one of the most remarkable events of our time, Sir Gilbert Scott was well aware, that for any revival to have a chance of permanence, it was necessary that it should rest on a rational basis. We have seen, on former occasions, how spontaneous and irresistible was the Renaissance movement in Italy. In our country it was hardly less potent, though, in accordance with the genius of the English people, the march of change was more measured and gradual. It was, however, none the less complete. Wren spoke, as we know, of Gothic as a barbarous style, and his towers at Westminster Abbey remain to testify to his imperfect appreciation of Mediæval art. His whole soul was thrown into the revival of his own day, which aimed at the adoption, more or less, of Roman forms in all our architecture, whether sacred or domestic. The "revival of letters" led the way to a revival of architecture, and the effects of the then recent Reformation had no inconsiderable share in inducing men to be ready to break with the past.

The movement towards a Classic revival was not partial or insular. It extended to all civilised nations, and although it may have been checked, it has never been stopped, and is still in progress.

There are those who, as we know, repudiate Revivals, and think by so doing to obtain originality. A vain hope! Architecture, though the first among the arts, is not free, as are her sisters of Painting and Sculpture. She has a scientific or material as well as an artistic side, and must accept limits, or fetters, if you like to call them so. She has, moreover, to regard antiquity, and must take into account that reverence for the past, which mankind in general largely entertains. She has further to be useful, as well as ornamental, and must therefore restrain her genius by the canons of common sense.

Sir Gilbert Scott was a revivalist by taste, as well as from conviction. He tells us, his "love for Gothic architecture was absolutely spontaneous," and that he then looked on Classic work, as "an alien to our race and our religion." I do not share this opinion, but we may see in the very strength of the expression, a proof of the devotion which is characteristic of an earnest artist.

The advocates of originality in architecture will, however, return to the charge. "Why," they will say, "have Revivals at all?" Architecture used to be progressive, changes arose indeed naturally, as blossoms succeed buds, but such violent revulsions of public taste as the Classic Renaissance on the one hand, and the Gothic Revival on the other, are modern portents.

The only answer that can be given, is that circumstances are changed. We can never be as our forefathers were. The time is past when men agreed to receive their policy, their religion, their architecture, from others. The "revival of letters" was an outburst of freedom, and if we will have liberty, we must accept its drawbacks.

Let us consider for a moment how such liberty has worked in the architectural history of our country, from Mediæval times.

In the Gothic architecture of England, we may easily trace the progress spoken of by these objectors, up to a certain point. Then it ceases, a retrogression begins, and, ultimately, the Renaissance appears, involving an abrupt break with tradition. We have seen how the Saxon style gave way to the Norman, and also how the so-called Early English and Decorated varieties continued the onward movement. At last, in the Perpendicular and Tudor periods, signs of faltering energy became apparent. The

* First Lecture. See p. 116, *ante*.

increase of appliances for domestic comfort gave an impetus to changes of form, in the direction of the trabeated or horizontal principle; while a superfluity of ornament evidenced the decay of the great principle of noble architecture, decorated construction, as opposed to constructed decoration.

The old forms were soon to be discarded, together with the decoration which had, more or less, corrupted them. They took refuge for a time in the architecture which we call Elizabethan, or Jacobean, but which is, in truth, Transitional, and had not time enough allowed to it, for being formulated as a regular style. Mediæval art seemed to have run its course, and to be about to expire, when the Classical revival of Inigo Jones and Wren arose to bid it disappear.

Why was the change welcomed? The new literary enthusiasm had perhaps the first place among the factors of change; but must there not also have been other causes at work? More elaborate requirements called, it may be, for more complex arrangements, and for these the old Mediæval architecture might be deemed unfit. The necessities of modern life may have seemed opposed to Mediæval feelings and traditions, and thus a change, which was almost a Revolution, may have come to be hailed with satisfaction, and even with enthusiasm.

Whether, if the new love for the history and literature of Greece and Rome had not arisen when it did, it would have been possible to develope from the Tudor and Elizabethan architecture of England a style which would have sufficed for modern wants, is a problem which has never been solved. It is, I think, matter for regret that this is so. Our English Transitional designs have many merits, and possess, as it seems to me, much capacity for improvement.

The leaders of the great Gothic Revival, with which Sir Gilbert Scott was connected, took a less hopeful view. They looked further backwards to Mediæval works alone, and seemed to regard the past as a garden, from which flowers might be culled at random, adopting one Gothic style or another, as individual taste dictated. I do not mean to discuss now the advantages or the drawbacks of such a course; but it is evident that a Revival pursued in such a manner is not a development, but an eclectic adoption of certain phases of an old order of things.

The Renaissance revivalists were somewhat stricter, possibly because they had a less wealth of material on which to exercise their choice. The Romans adopted Greek architecture as a whole, while adding to it the arch, with all its far-reaching consequences. The introduction of the arch was, to a great extent, an engineering expedient. It gave power, freedom, and variety to the graceful, if somewhat monotonous, forms of ancient Greece. The latter were used by the Romans for frontispieces, as in the application of porticos, with horizontal entablatures, to buildings in which the arch predominated. The beam and the arch thus co-operated in a friendly rivalry, and that they can so co-exist, is one of the claims of Classical art on our approval to-day.

Wren, the great master of the English Renaissance, availed himself of the liberty thus accorded to him. Inigo Jones, in his new portico to S. Paul's, exhibited a trabeated construction, and in the executed fragment of his design for Whitehall the arch finds no place. Wren, however, used the arch with readiness, and adopted its noblest exemplification as the crowning feature of his greatest work.

The Mediæval architects had found out, long before the Renaissance, that the severity of the pointed arch involved them in difficulties, particularly in domestic work. The segmental form and the four-centred depressed arch, were the expedients adopted by them to overcome the inconveniences which made themselves felt; but although by such methods increased plasticity was obtained, it may be doubted if it was not too dearly purchased, and Mediæval art has never, at any rate, felt itself able to accept the joint services of beam and arch with the same alacrity that was displayed by the Renaissance architects.

When we consider the progress of the Renaissance movement, and observe how, starting from Italy, it penetrated into all countries, establishing itself everywhere, with more or less success, it is impossible to avoid the conclusion that there must have been some potent reason of general convenience underlying so remarkable a propaganda. In this country, after the new method had taken root, it needed a new revival to obtain even a hearing for the claims of the old Mediæval art.

It appears strange to us that, with such vast stores of Mediæval artistic beauty as England possesses, such a state of things should have been possible. We may have our individual predilections for either of the rival schools, but it may almost seem to us a thing incredible, that Wren, for example, should find nothing to admire in Westminster Abbey.

It was, perhaps, from the artistic deficiency exemplified by such an instance, that the revived Classical architecture in England ceased to advance, and then became neglected. It had, indeed, been, to a great extent, imposed from above. The king and court were the first patrons of the new order of things, and the revival, therefore, lacked spontaneity.

Then came, in process of time, tastes for Egyptian art, and imitation of Greek temples, with little real feeling, and still less power to adapt, rather than copy, with a blind subservience, forms which are unfitted for our wants, and unsuitable to our climate. Such reproductions could not commend themselves to the practical conclusions of our countrymen; and they served therefore, as episodes only, in the architectural history of the day.

The impetus of the Classical revival was well nigh spent, and the age of no-architecture appeared to be at hand. Houses without taste, and churches in decay, abounded, in what may be called,—*The Dismal period*,—the period of Bloomsbury streets, and Batty Langley's Gothic.

It was then that the important movement arose, in the later phases of which, Sir Gilbert Scott was destined to take the foremost place. Horace Walpole had played with Gothic at Strawberry Hill, and Sir W. Scott had entranced a nation (already, alas! half forgetful of him) by the creations of his genius, which turned men's thoughts to the habits, customs, and architecture of olden times.

Sir Gilbert Scott has himself told us, however, that these things did not move him, and that his love for Gothic art arose independently, and with an unconscious will. We are all of us, nevertheless, so much influenced by associations, that it is difficult for any one to assert an absolute independence, and it may well be that he was drawn on, like others, by unseen influences.

A revival, if it be more than a passing fancy for a new plaything, must be called for by some new want to be supplied, or by some deficiencies to be atoned for. At the time of the Gothic revival, both these conditions were present.

In the first place, a craving had arisen for something better than the then prevailing dreary bareness of churches, public buildings, and houses. Men began to turn to art as a civiliser and teacher; a revived earnestness in religion brought new forces into play, and everything became ripe for an architectural revival.

The new desire for something superior to the architecture of Baker-street had already shown itself in such monuments as St. George's Hall, Liverpool, the Royal Exchange, the clubs in Pall-mall, and important buildings for City companies, banking, and other associations, in London and elsewhere. Thus far, the idea had been to take up the work of Inigo Jones and Wren; to purify it by the refining influence of Greek art, and, in this way, to carry on the Renaissance to a successful development.

The movement has never stopped. A time came, however, when it was checked. This was the period of the Gothic revival.

I have spoken of deficiencies, to be made good. An age of ecclesiastical neglect had allowed our cathedrals and churches to fall into decay, and there was ample room for the energy of one of the leaders of the revival, the Cambridge Camden Society, with its suggestive motto, "*Donec templa refecoris.*"

A nation so conservative in its instincts as the English could not long tolerate the sight of churches closed for want of repairs, and cathedrals walled up, and divided, because avoided, and disused. A cry was therefore raised for the building of new churches, and for the repair and restoration of old ones. A strong ecclesiastical movement revived an interest in the fabrics, while it pressed earnestly for consideration of the spiritual necessities of the Church.

Sir Gilbert Scott soon became identified with the Gothic revival, and one of the best known of his early works, which brought him fame and reputation, is the parish church of St. Giles, Camberwell.

In the competitions at Hamburg, he further proved that English architects feared no foreign rivals, and could encounter them, in their own country, with success. The noble church, erected as the result of one of these competitions, is among the most important works, wholly designed by Sir Gilbert Scott, and was, I believe, so considered by himself.

The Gothic movement would scarcely have advanced as rapidly as it did, if it had not been for the choice of Gothic architecture for the rebuilding of the Houses of Parliament. For this work, it became necessary to train workmen for the various departments of stone and wood carving, encaustic tiles, decoration, metal work, &c. Of the leaders in such teaching, none can compare with Augustus Welby Pugin, who lent his willing co-operation to the architect of the building, my father, Sir Charles Barry.

To educate workmen in Gothic principles of work, collections of casts and specimens were made, and Sir Gilbert Scott became one of the first and warmest supporters of the Architectural Museum at Westminster, an institution established with this object.

The influence exerted by Pugin and his followers made itself felt in all the subsidiary pursuits which are allied to architectural design, and thus it became possible for architects to ensure the due execution of their ideas, in the style now coming into use.

Gothic churches multiplied, cathedrals were repaired and restored, and became once more thronged with overflowing congregations. The old neglect had passed away under the energetic impulse of, it may be, a too indiscriminating zeal for newness, under the name of Restoration.

Architecture was again enlisted in the service of the church, and many a fierce controversy about Ritual arose from the connexion. The days of barn-like churches were over, and whitewashed interiors were no longer considered a necessarily Protestant institution. The duty was everywhere preached of building our churches in all the "beauty of holiness."

The taste for Mediæval architecture was thus warmly encouraged by the clergy, who looked upon themselves as the guardians of our sacred buildings, and were active promoters of a Revival which they were able to make ancillary to their own views of ecclesiastical polity.

In secular work, the new taste also prevailed, although not so strongly. Banks, town-halls, law courts, and other important buildings were erected in one of the Gothic varieties of style; although for such purposes, the Renaissance was still often employed, as, indeed, it is at the present time, when signs may perhaps be detected of an increasing feeling in favour of Classic architecture or some modifications of it.

In adapting the revived Gothic for such buildings as I have mentioned, certain inconveniences were felt, and increased elasticity came to be desired. Some of our architects have sought to attain these ends by mixing Italian and French peculiarities of detail with those which are purely English. The employment of large shafts in columns, and the partial abandonment of moulded, for plate tracery, date from this period. Sir Gilbert Scott did not, however, accept with any readiness such a modification of the revival movement. To him it was a national effort to revive the English forms of Mediæval architecture. We may see traces of admixture of the foreign element in certain of his church fittings, but in his more important designs for buildings (always excepting the Albert Memorial in Hyde Park), he remained, as he began, emphatically an English architect. At the time of his death, Gothic architecture had become completely accepted as the Ecclesiastical style, while, for other buildings, no final decision can be said to have yet met with general consent.

Sir Gilbert Scott was, neither by taste nor temperament, an innovator. He wished to restore, in architecture, the ancient ways, with due regard to the different circumstances of modern life. In the conduct of a great movement, there is room for diversities of character, and enthusiasm will sometimes lead to extravagance. The Gothic Revival, and the so-called Tractarian movement went on together, hand in hand, with mutual help and sympathy; but Sir Gilbert Scott was too earnest a champion to wish his cause to be identified with any single party. In his works we may see evidences of sobriety of taste, and calmness of judgment, such as distinguished many of the High Churchmen of the day, as, for example, the late Dean of Chichester. To such minds, the Revival was welcome, as long as it did not go too far, and

enabled them to tread the *via media* of safety. Sir Gilbert Scott may perhaps be called the Dr. Hook of the architectural Revival.

He was not content to limit the claims of Gothic, however, to ecclesiastical purposes, but published an earnest appeal for its employment in secular and domestic buildings. This appeal was, however, but partially successful, and he had the mortification of seeing his most important design for a public work, the public offices, set aside by Lord Palmerston, from an avowed preference for Classic architecture.

Many of us may remember the fierce controversies that raged, on that occasion, between the advocates of the rival systems, a veritable "Battle of the styles." Discussions arose, on all sides, as to the suitability of various details, to the wants of modern life. Must a Classical building be inconvenient? Can sash-windows be used in Gothic windows? Such, and many other questions were asked, with little heed to the answers.

I dare say many of you may still feel bewildered at the din of rival schools, and are perhaps asking the old question, "What is truth?"

The freedom of art rejects infallibility, but some answer may perhaps be found in the reflection that though styles may be many, art is one, and catholic. All good styles have the same characteristics, and it may be our part to seek to grasp true artistic principles, while refusing to be bound by too precise forms.

With the history of all styles before us, there can be no good reason why we should voluntarily shut up the stores of knowledge at our disposal. Rather should we seek for the key to enable us to profit by the rich and varied accumulations of the past.

Truth and beauty are to be looked for in all really healthy forms of architectural art, and we may fairly apply these principles as tests. We must have truth, not only in construction, but also with regard to the general character of our work, its proper application to the purpose intended, its suitability to the climate, the habits of its proposed occupants, and to the materials employed.

In all these things, nature may be our guide. Not, as I have before endeavoured to explain to you, that architects can go to nature for direct inspiration, but because they can learn from her, as they can do in no other way, the perfect application of the principles of truth and beauty in those works of the Almighty which seem to have been intended to elevate the mind of man above the passing miseries of the world, and to draw it upwards to the contemplation of a perfect and glorious future, in which Good will rule for ever over Evil.

Our architecture must also be beautiful as well as truthful. Here we tread upon the embers of the old contention that Truth *is* Beauty. To accept this doctrine unreservedly, we must adopt a very far-reaching definition of truth, which, it may be feared, a combination of art with science, such as architecture, will never be able to agree upon. In the meantime, architects must accept the doctrine that their work should please from its beauty, as well as satisfy from its truthfulness.

You will, I believe, be more likely to be successful in this aim if you are contented to be guided by the past, than if you are for ever striving for originality, and for new combinations.

Nothing is more striking in the great works of architecture than the effect produced by the skilful combination of a few forms. We cannot be always inventing new shapes of arches and pillars, mouldings and capitals, but we may at least seek to acquire the power of using the materials we have intelligently and with beauty. An unsparing critic of architects has lately declared, that "what we want is not a new style, but the genius or taste to build decently in any style."

If this be so, we may at least plead for a certain liberty, and decline to be bound by the arbitrary ruling of those, who, having acquired a predilection for one style, or even for one fleeting variety of a style, denounce all others with an indiscriminating intolerance.

Such has not been the teaching from this place, either from Professor Cockerell, Mr. Smirke, or Sir Gilbert Scott.

The first-named refined and gifted artist ever recognised the essential principles of art, in whatever forms he found them embodied. These latter were to him mere accidents, and were not suffered to obscure the divine flame of genius. Professor Cockerell was an ardent admirer of Greek art, and its influence pervaded all his work. He occupied a foremost place in the revived Renaissance movement, already referred to, and he left behind him a school, a tradition, and a most worthy representative. Alas! that I must speak of the latter, as of the past. Cut off in the prime of life, in the fulness of power and genius; a graceful artist, a true and generous friend; those who are left to bewail his loss may find some consolation in the reflection that the mantle of the father had descended to the son, and that in his hands a great architectural name had suffered no diminution of lustre.

Sir Gilbert Scott, in his teaching here, repeated almost the words of Professor Cockerell, in enjoining a candid examination of the principles of diverse schools.

In his last lecture, he thus counselled students of our art,—"In these days of miscellaneous distraction, it is difficult to give advice as to the choice of a groundwork of study. Having no actual style belonging to our age, you must choose between the two Renaissances,—the Classic and the Gothic,—as best you may." Further on, he says,—"Your choice being made, you must study with all diligence, and with the most assiduous attention, the best and purest examples of the style you have chosen; making yourself thoroughly acquainted with it, from its very root to its minutest details, and using every endeavour to catch the true artistic spirit of the style, in its best phases."

These words were uttered more than five years ago, but they are not less applicable now than when they were first spoken. Indeed, they may almost seem to have been prophetic of a time when the exclusive principles of the Gothic revival may, perhaps, have lost something of their strength, and when certain of the more adventurous spirits among us appear to be striving for a fusion or compromise, where lately all was sternness and exclusiveness.

For my own part, I cannot but adhere to the teaching of my distinguished predecessor, with this difference, that his tastes had led him into the Mediæval camp, while mine tend in the opposite direction. There can be no legitimate grounds for expecting success, on either hand, unless with devotion and enthusiasm, and a firm resolution to do your best. Advancing in this manner, with science as his handmaid, and the accumulated knowledge of the world open to him, the architect may yet hope for success in his art, not inferior to that which has illuminated the past history of the world.

I commend to you the above quoted advice. It is always interesting to discuss the possibilities of an architectural future, and we may amuse ourselves with devising *châteaux en Espagne* in a new and perfect manner; but, in the meantime, we must deal with the styles familiar to us, and do our best with them.

The great revival movement, which Sir Gilbert Scott did so much to further, has now reached a respectable age, and we can in some degree measure its results.

Fostered by ecclesiastical influences, it was but natural that it should illustrate the effects of that powerful impulse. The greatest architectural successes to which it has given rise may consequently be looked for in the structures intended for sacred uses.

The name of Sir Gilbert Scott will ever be indissolubly associated with such works, and it is upon them, that his fame will chiefly rest. In his case, as in that of Sir F. Grant, we cannot now determine the award that will be ultimately given by posterity. There are too many differences among living critics to allow us to recognise their judgment, whatever it may be, as final, in a case of contemporary history. The heated discussions, on questions of restoration alone, will suffice as a warning. No one, I suppose, will dispute that an age of neglect must be followed by an age of new building, or by an age of Restoration. If this were not so, architecture must perish out of the earth.

The Gothic revival partook of both these characteristics. It has been an age of new building, for it has covered the land with new structures, designed, more or less, on the old Gothic principles. It has also been an age of Restoration.

How far restoration may be carried is, as you know, a subject of fierce controversy at the present time. Are we to rebuild deformities because they exist? If not, what canon of taste or archæology is to prevail? On this point, I may perhaps quote once more from the words of the illustrious original President of the Royal Academy:—"Ancient ornaments, having the right of possession, ought not to be removed unless to make room for that which, not only has higher pretensions, but such pretensions, as will balance the evil and confusion which innovation always brings with it."

Having given full weight to this wise advice, we must remember that modern restorers have had to deal with difficulties, not of their own creating. No name will be handed down to our successors as much connected with recent restoration as that of Sir Gilbert Scott, and no one has been more vigorously, and, as I think, in many instances, more unjustly, assailed, in reference to this question.

It is all very well for a number of gentlemen, especially if possessed of *dilettante* tastes, to denounce all alterations, and tell architects it is their duty to preserve everything that has an historical interest, regardless of convenience, and treating good and bad alike.

Architects, however, have to deal with the pressing and practical wants of the day, and must bring common-sense to bear on their daily work. It is quite right that they should be conservative in spirit, jealous of unnecessary change, and should regard the ancient buildings committed to their charge as a sacred trust.

It is, however, a very different thing to forbid all restoration and change; and when this is done by those who have no responsibility in the matter, it is difficult to avoid thinking of certain persons who loaded others with burdens too heavy to be borne, and would not touch the same with one of their fingers.

Mistakes will, of course, be made in all great movements, such as that of the restoration of our Mediæval monuments. In so long, active, and laborious a career as that of Sir Gilbert Scott, I doubt not that episodes occurred which may not have commended themselves to his riper judgment; but I am sure that, many of those who have been ready to listen to accusations of rashness, formed an erroneous view of the character of our departed friend,—of his painstaking habits, his calmness of judgment, his modesty, and his love for his art. To some dispositions, such public attacks as are too often lightly made, become a heavy burden, and I have reason to believe that they were latterly much felt by Sir Gilbert Scott.

A great architect stands forth before the world. His works are public property, at least as regards the right to criticise and assail them. His deeds are not like those of statesmen, lawyers, and other public men, whose mistakes are soon absolved, if not soon forgotten, nor can his failures be buried, like those of another profession. It may perhaps be whispered that even our greatest men do sometimes go astray; but the architect must be infallible. He is supposed to be bound to break a lance with all comers, and must be ready to defend works executed by him in the first enthusiasm of youth, as well as his achievements of yesterday. I will not complain of this necessity; but, may I suggest to some of our critics how they would regard such demands if applied to themselves?

If architects be taunted with their inability to agree on the style to be adopted and the principles which should govern their art, it may perhaps be remembered that such doubts are not their exclusive heritage, and that even doctors have been known to differ. Nay, if we take a wider range of vision, and lift our eyes to the dignified eminence of the judicial bench, laymen may possibly be excused for thinking that the "battle of the styles" shrinks into insignificance in comparison with the battles of the Judges.

It is not for me to defend the restorations of Sir Gilbert Scott, still less to assume, respecting them, the semblance of an apologetic tone. His works stand on their merits, and need no champion. I wish, however, to caution young architects against lending a too willing ear to deprecatory anonymous criticisms. It is never difficult to find fault. The *suppressio veri* and *suggestio falsi* are twin-brothers of evil. No work of architecture that the world has yet seen is beyond criticism. How easy for any one to enumerate a string of faults, and shut his eyes, with wilful blindness, to merits and success.

It was declared lately, and most truly, that it is impossible to have a generation of great artists, when the general taste is degraded. To prevent or to remedy such a state of things is the office of the real critic. Good criticism is

therefore, I believe, not only an advantage to good art; but even a necessity for its existence. To be useful, however, it should be candid, and even generous. When you read in a newspaper a wholesale condemnation of the work of a great man, receive it with distrust. It is not, on the face of it, likely that all he has done is bad; there must surely be some merit, some redeeming qualities, which call for appreciation. You may at least pause before you denounce one on whom responsibility weighs heavily, an artist who has won his way anxiously and toilfully up the ladder of fame, at the bidding of some clever writer of smart sayings, who pens his fierce censures behind the often unfair shield of anonymous secrecy, which prevents all knowledge on your part of his fitness for his office, and even of his motives.

If you desire yourselves to obtain success and fame in your profession, do not believe that great reputations are lightly won, or easily supported. Do not expect that the goal is to be reached, otherwise than by patient and laborious steps. Once more quoting Sir Joshua Reynolds, "Students must therefore be told, again and again, that labour is the only price of solid fame, and that whatever their force of genius may be, there is no easy method of becoming a good painter." With a change of the last word, this doctrine will apply as fully to the architect as to his fellow-student. In no profession, other than his own, is steady application more required. You must not be discouraged at failure, and must be prepared for censure when you have perhaps expected praise. Sir Gilbert Scott's reputation stands so high that it can afford to be fairly criticised. I do not say that you are to refuse to listen to any reasonable discussions of particular works, but I do ask you to enter upon this consideration with a presumption in favour of the architect who has brought to his task the learning and devotion of a life, and has probably dealt with questions, now raised as novelties, when some of his most confident assailants were in their cradles. "Remember," as was said not long since by a modern Nestor in council, to a youthful and somewhat pugnacious disputant, "even the *youngest among us* may err sometimes."

Sir Gilbert Scott was too learned to be overconfident. Invariably kind to the young student, he was all his life a student himself, and his modest unassuming manner bespoke the character of one who was ever a learner. His name lives not only in stately cathedrals, but in many a lowly village, as the great church-architect of his day. He was a worker at his art until his death; and when his time of rest came, his remains were fitly placed in that famous abbey which he loved so well; that national Campo Santo, where sleep so many of the great and good ones of the past; that Royal Church whose very name causes a thrill wherever the English language is spoken, and has braced the nerves of many a man, from Nelson downwards, to do his duty in the service of his country. His grave was formed by the side of that of Sir Charles Barry, to whose place in the Royal Academy, he had succeeded, on the death of the latter in 1860.

The career of Sir Gilbert Scott was, as I have said, in some respects, unique, and, in all probability, the exact circumstances of the revival which affected it, can never recur. To you, gentlemen, as the younger standard-bearers of the profession, it may nevertheless supply encouragement. We may all, at any rate, determine that our noble art shall not suffer in our hands by any lack of devotion, hard work, and perseverance. Thus may we follow, though, it may be, at a distance, in the steps of the great men who have passed before, and thus may we endeavour to deserve, if it be not given us to achieve, success which may compare with theirs.

Workmen's Industrial Exhibition.—In consequence of the success of the recent exhibition of this nature in the same locality, it has been determined to hold in Westminster another exhibition, "open to the *bonâ fide* work of persons belonging to the industrial classes resident in London." At a public meeting held at Grosvenor Hall, Buckingham Palace-road, on Saturday, the Right Hon. the Speaker in the chair, resolutions to this effect were passed, on the motion of the First Lord of the Admiralty, Sir Rutherford Alcock, Sir J. M'Garel Hogg, and other gentlemen.

THE LIBRARY OF HERCULANEUM.

THE visitor to the rooms of the National Museum at Naples, rich in priceless treasures, must have observed in one of the upper apartments several curious sets of apparatus at work, and wondered no less at the objects than at the indescribable patience with which the labour bestowed upon them is pursued. He would observe there, in glass cases about 3 ft. high, and placed upon small tables, cylindrical pieces of a charred material, hung up on fine threads and carefully bedded on wadding, of which various parts have been peeled off and pasted on thin, transparent skins supported by the threads. Year after year workmen are seated at the small tables, operating with astonishing care and patience on the pieces of charcoal, and trying to detach their surfaces by means of chemical liquids, gumming materials, and pincers. On the walls of the room are hung up, framed and glazed, larger and smaller black strips, and leaves are to be seen which have evidently been obtained by that patient labour; and if we take a closer look, we notice closely ranged characters, and under each strip or leaf a label, containing, for instance, *Φιλοδήμου περὶ μουσικῆς* (Philodemus on Music), *Ἐπικούρου περὶ φύσεως* (Epicurus on Nature), and so on; and there can be no longer any doubt that we have writings, and of old authors, before us. Indeed, they are authors of Rome and Greece, who are once more being rendered legible to us by the labour described, and what appear to us as round pieces of charcoal are the original volumes of a library in which they were read more than eighteen centuries ago. The room is called the "Hall of Herculaneum Papyri," and its contents consist of the book-rolls found in the middle of last century in the buried town of Herculaneum, of which only the smallest portion has been opened and deciphered.

It is well known that, besides the Egyptian papyri, this find is the only one of its kind of classic antiquity. It was not a small triumph for archæology when, for the first time, such a manuscript roll, as it had been laid down by the ancients, was looked at and felt, and more so when the opening and deciphering of it had been accomplished. Of course it required a long time and great pains before this was attained. What is now considered an unheard-of act of vandalism,—that formerly the rolls were cut through lengthwise, and separated as well as could be done,—was considered a great gain at that time; and this will be easily understood when the nature of the rolls is taken into consideration.

The material on which the Greeks and Romans wrote, following the example of the Egyptians, was (besides the wooden tablets coated with wax, found in Pompeii, and the parchment invented by Eumenes of Pergamum) the fine bast of the papyrus plant (*Cyperus papyrus*, L.), growing in Egypt, Syria, and Palestine, as well as in Sicily, Calabria, and other localities. The carefully detached strips of the bast, generally from 10 in. to 12 in. long, and 4 in. to 5 in. wide, had to be prepared for use by washing, bleaching, and smoothing. The writing materials were cane pens and an ink prepared of soot. For a larger manuscript, of course, many of those papyrus strips were required, which were pasted together along their longest margins, so that each strip formed a column of writing about the breadth of the hand; and the whole "book" consisted of a long piece of papyrus several feet long. In order to facilitate handling and reading, the strip was fastened at one end to a round stick (the ends of which were provided with knobs), and rolled round it. The back of the leaves was not written on; consequently the title could be written on the outside of the roll, lengthwise, in large red letters of a more or less ornamental nature. In order to read, the book had to be held with both hands and gradually unrolled, by which one column after another became visible. All the Roman expressions having reference to books have been derived from this mode of procedure. *Liber*, "the book," originally means "bast," the inner bark of a tree; *volumen*, "the volume," indicates a "roll"; *pagina*, "the page," is connected with *pangere*, "to fasten," and describes the single "pasted-on strip." For opening the book, to "unroll" was used; for closing, to "roll up." The word "rubric" also may be ascribed to the fact, that the titles of books and their sections, especially of collections of laws, were written with red ink. In order to improve their appearance, the backs of rolls, especially of those exhibited by booksellers, were often dyed with saffron colour, the edge polished with brimstone and coloured red. Valuable writings were provided with an especial parchment covering, and for moving them about, large boxes were made, in which a number of rolls were placed upright, and which slaves carried behind children to school, or behind men to their offices and clubs. In the libraries the rolls were put into bookcases and on shelves in such a manner as to show their titles, the bust of any celebrated author often being set up above the section of the library where his works were kept.

The contents of a private library, dating from the first century of our era, were found thus arranged in Herculaneum. It was in 1752, consequently after a long break in the excavations, commenced in 1713, that the owner of an estate at Resina, in digging a well, came upon the peristyle of a handsome house, the so-called "Casa di Aristide." In its garden, which extended to the sea, there were found, between the columns of a pavilion, the bronze statues and busts numbered among the most valuable treasures of the Naples Museum, such as the Reposing Mercury, the Drunken Faun, the Sleeping Faun, the two Prize-runners, the so-called Seneca and Plato, &c.; in a small room of the principal building were a number of book-cases, and in the centre a round desk, in the form of a table. On the latter lay cane pens, styles, and inkstands. The former were surmounted by busts of Demosthenes, Zeno, Epicurus, and Hermachus, and contained nearly 3,000 well-arranged rolls. The book-cases, as well as their contents, were completely carbonised, and it will be easily understood how the black objects, which had preserved their cylindrical form more or less, and the edges of which showed a great similarity with the annual rings of wood, were mistaken for charcoal, and treated accordingly; for this discovery was the first of its kind. Nobody had seen papyri before; nobody expected to find them, and least of all could it have been expected to discover them in the form of charcoal; but even when the traces of writing were noticed, and Mazzocchi had declared them to be papyrus-rolls, the time for a suitable treatment and preservation had not yet arrived. We must not judge too harshly of the bad treatment experienced by these valuable finds, but must rather let the helplessness with which the extraordinary difficulty had to be faced serve as an excuse. But it is a fact that more than a third of the rolls have been either destroyed or lost. Only 1,756 rolls, of which many are fragmentary pieces, have been preserved. Of this number, up to the present time, only 186, consequently but the tenth part, have been unrolled, facsimilised, and published. No more than nineteen have been interpreted or translated; which furnishes a striking proof of the material and scientific difficulties of the labour.

Thus forty years passed after the discovery before it was possible to publish one page. No means had yet been found to open the rolls, which crumbled to dust on being touched. It was Peter Antonio Piaggi, of Genoa, who succeeded in inventing an arrangement which is as simple as it is ingenious, and by means of which all the results enumerated have hitherto been obtained. The apparatus still in operation is the same as that invented by him. Parallel strips of thin skin are gummed on to the surface of the roll, and gently tightened by means of silk thread, after separation has been assisted by means of the pincers. The roll then begins to revolve slowly on a bed of wadding, and permits of the gummed-on parts unrolling themselves in the degree that its own weight offers resistance. The work requires untold patience and painstaking, and proceeds very slowly indeed; but it offers safety against damage to the papyrus, no other force but its own weight coming into operation during the process of unrolling.

The first volume of the *Volumina Herculanensia* was published in 1793, to which ten others followed up to 1855. They are folio books, which, besides *fac-similes*, contain a mass of supplements, notes, and commentaries, but they deal with only nineteen papyri. Were the remaining work to proceed at the same rate, it would require nearly six thousand years and over a thousand folio books to publish 1,756 rolls! Fortunately the work was considerably accelerated when, in 1802, Hayter, commissioned by the then Prince of Wales, the Neapolitan Government consenting, began to take part in it. Assisted by Italians expert in the labour of

unrolling, and saving neither pains nor expense, he had within a few years opened over two hundred papyri, and would have attained much more, had not the entry of the French into Naples compelled him to leave that city. The *fac-similes* of ninety-six papyri came at that time into the possession of the Prince of Wales, and through him went to the University of Oxford, where they are still. Of the originals, which remained in Naples, new drawings were made, so that there exist two sets of the *fac-similes* of those ninety-six rolls. Of these, only the best, to the number of seven, were lithographed, and published in 1824-25 by the University, but without any commentary.

In Naples, the work of publishing commentaries, commenced quite out of proportion, could naturally not keep pace with the work of unrolling and making *fac-similes*. After the capture of Naples in 1860, the Italian Government found over 2,000 copperplates with the *fac-similes* of 160 papyri. Without waiting for the work of translating and commenting, they began in 1861 the publication of a new series, which, like the first one, closed in 1855, embraces eleven folio volumes, each of five parts, and at this moment is very near completion. The appearance of the fifth part of the eleventh volume has just been announced. Thus we have, as already remarked, at present published before us 186 papyri, but only nineteen commented on, while, besides, about 300 have been unrolled and partly,—as far as possible and they were worth the trouble,—*fac-similes* taken of them. It will easily be believed that this is not possible in all cases, as many are preserved only in fragments, and in a very bad state. But even those that are legible are by no means all worth the pains bestowed upon their deciphering. Indeed, it may be stated that, taken on the whole, the find at Herculaneum remains far behind the expectations which it at first had given rise to. But we learn from it that a comparatively rich private library of the Roman Empire contains extremely little that could be instructive to us. We notice how the spirit of Cæsarism had confined and depressed to an incredible degree the interest in literature as well as the extent of the writings that served for private reading. How valuable it would have been for us, and with how much right we might have expected to find at least something of the numerous lost writings of the most eminent Roman authors of the first century; whether it be of the older poets, as Ovid, Pedo Albinovanus, Sabinus, or of the more modern ones: Lucanus, through whose art Nero suffered the pangs of jealousy; Curiatius Maternus, who was highly esteemed by Tacitus; Lucilius, Cæsius Bassus, Persius, and others. Might not the lover of art and books of Herculaneum who bought the 3,000 rolls, or had them written out, have had copied for his use also one of the most important Roman works of the time: say a few books of Celsus's Encyclopædia, of Verrius Flaccus's Lexicon, of Asconius Pedianus's Commentaries, of Seneca's Controversies, if he took an interest in philology and practical philosophy; but if he loved history and light reading, a piece of Livius, Pompeius Trogus, or at least the novel of Petronius?

Nothing of all this. Not a single one of the more eminent Roman authors has been discovered among the manuscripts examined. A strange irony of fate has willed it that in the library of the Roman town almost exclusively only Greek writings have come to light. The few Roman works, at present only eighteen in number, are completely illegible, with the exception of a single roll, and this contains a fragment of a poem on the battle of Actium, alleged to be by Rabirius, an epic poet.

The irony of fate goes further. If the Greek manuscripts were at least historical writings and poetical contributions, instead of philosophical works! Or if we had but found writings of the more eminent older philosophers! Or if at least the most important school of the time, the Stoics, were represented! What have we instead? Numerous treatises by disciples of Epicarus, while of his own principal works, embracing thirty-seven books "On Nature," only fragments of the second and eleventh books have been found; and of a manuscript of the most eminent representative of Epicureanism in Rome, Lucretius, which would have been highly interesting to us, not a trace has been discovered. Of Stoics, Chrysippus alone, with his treatise "On Providence," was represented in the library; the title only is preserved, which was already known before.

Amongst the manuscripts with which we have become acquainted are the following:—Polystratus, "On Unfounded Pride," partly well preserved; fragments of the Epicureans Colotes of Lampsacus; Demetrius the Laconian; Metrodorus, "On the Feelings"; a certain Carniscus, an anonymous writer "On Anger," and others; and, finally, a large number of treatises by Philodemus of Gadara. The latter, also an Epicurean, and contemporary of Cicero, known already through a few of his epigrams in the Greek Anthology, as well as through being mentioned by Cicero, and a reference made by Diogenes Laërtius to his philosophical history, is the only author the acquaintance with whom has been augmented by the manuscripts of Herculaneum. We know now his writings "On the Animals," "Death and Religion," "Life and Morals," "The Vices," "The Vices and the Opposite Virtues," "Phenomena in Nature," "The Inferences of Induction," "Piety," "Music," "Rhetoric," "Poems," &c.,—altogether twenty-six various writings which bear his names and were formerly unknown. They represent him as a man of decidedly Epicurean views, and as a writer of fluency of style and vivacity of expression, but one not approaching the most eminent adherents of the school. It is therefore surprising to see, in a collection of books in which the greatest writers are so sparsely represented, an inferior disciple, otherwise hardly known in literature, with such a large number of works, which gives some ground for the supposition that this library may have been derived from the estate of Philodemus himself.

The papyri found at Herculaneum have consequently furnished a not inconsiderable contribution to the history of Epicurean philosophy. On the whole, however, as will appear from what has been stated, their importance is small. Although about 1,200 rolls are still awaiting resuscitation, we are not justified in expecting too much information from them, for two reasons. In the first place, a considerable portion will be illegible or otherwise of no use; and, secondly, there will be found among them numerous duplicates and continuations of the works already named, quite independent of the fact that among the number of 1,756 all fragments have been counted separately, of which often several form but one roll. If we, in accordance with Comparetti's calculations, reduce the number of rolls to 800 or 900, that of complete writings must be fixed still much lower, each book of works divided into several books being written on a separate roll. The work of Epicurus, therefore, takes up thirty-seven rolls, and as there are three copies of it, as proved by Gomperz, no less than 111 rolls must be assigned to it. Other writings also, for instance the treatise of Philodemus "On Rhetoric," are present in duplicate, and of others considerable portions may be expected, as of that of Philodemus "On the Vices," of which only the tenth book has been found.

If the works of many of the authors have been restored only in fragments, on the other hand many cannot be assigned to any writer. The names of authors are, as a rule, stated on the manuscripts in two places, at the beginning and end. The head of the roll, being most exposed to the influences of heat, wet, and pressure, is usually the part most injured, so that the first lines are but seldom legible. In most cases it has been found impossible to penetrate to the heart of the papyrus roll; indeed, the instances are very rare where this has been successfully accomplished. Consequently, the determination of the author of a volume rests often solely upon a comparison of the contents with the contents of other signed rolls, and a conclusion which certainly in most cases where we have to deal with parts of one and the same work leaves no doubt. But the knowledge of their origin must be entirely dispensed with in the case of a good many fragments.

Notwithstanding the scanty harvest, the Italian Government, of course, will continue the work, the possibility of unexpected important finds being by no means excluded. As soon as the copper plates already finished have all been published, the numerous drawings which, as yet, have not been engraved will also be made public. One of these, containing new fragments of Philodemus, of a History of Philosophic Schools, was published by Comparetti as early as 1875. The latter, also, in an essay which made its appearance quite recently, defends his countrymen against an accusation levelled by foreigners, amongst others by Ritschl, in 1838, that they had been careless with the papyri, and not derived the profit from them by far which "more intelligent" people would have gained. He cites as a proof of the worthlessness of this assertion the fact, that in 1806 the Bourbon Government made presents of twenty-six of the best preserved papyri partly to the French, partly to the English Government, but that up to the present time not a single one of them had been opened. In 1818, as he further states, a German, Sickler by name, tried to unroll those that had reached England, but obtained no better result than to utterly destroy seven of them.

It might be urged, in answer to those reproaches, that the Italians also took a long time, and destroyed, by an erroneous treatment, a far larger number of papyri before they attained to their present expertness, which is certainly astonishing. But instead of giving vent to such national bickerings and jealousies, it will certainly be better to exchange mutual congratulations at the results already attained, and to wish best success to the laborious work in progress.

THE LAW AND THE SITE OF HOSPITALS.

Architects are chiefly interested in the decision given by Mr. Baron Pollock, on the 28th of January, in the case of Hill and Others *v.* The Metropolitan Asylums Board. It is not so much the individual case which is of public interest (although the local importance of this particular contention cannot be easily overrated), as it is the state of the law laid down, that concerns the profession. No more important charge can be entrusted to the hands of an architect than that of the design and execution of a hospital. Large sums of money are devoted to these buildings; and it is of essential interest to the entire community that all that skill and experience can do to make them perfect should be done. Of course, the first question to be determined is that of site. This is also the most difficult question. And there is no doubt that the difficulty is greatly increased by the decision on the present occasion. As to the verdict of the jury, and the consequent decision of the judge, we have nothing to say. We have only to accept them as indications of fact, and of law, subject to any further proceedings by way of appeal. But the difficulty lies here. A hospital, if built at all, must be built somewhere. For the sake, both of the patients and of the neighbourhood, it is most desirable to have it out of town. For the sake of the patients it is essential to have it as near to town (whether London or any great centre of population be indicated by the expression) as a vacant and salubrious site can be found. But these commodious and favoured spots are precisely those of the highest residential value, and the owners rise in arms and say,—You shall not bring infectious disease here! What is the architect to do?

In the present case the defendants pleaded that they acted under the authority of an Act of Parliament; but it was admitted that the Act did not indicate the exact site they have selected, nor did it direct them to carry it on as they actually did. The jury found that the hospital was a nuisance to each of the plaintiffs *per se*. They also found that it was a nuisance to each of them by reason of the patients going to and coming from the hospital, the infectious nature of the disease for which it was erected being, of course, borne in mind. The third point found by the jury was that even if the defendants were authorised to build a hospital on the site selected, they did not erect and carry it on with due regard to the plaintiffs' rights. On the other hand, the jury admitted that everything had been done properly within the hospital, and great praise was due to the medical attendants and nurses. It is impossible more exactly to define the very point which is most perplexing to the architect.

The learned judge observed that the point first raised by the defendants was not only new, but was fraught with the most serious consequences. They argued that they were not liable for damages, because they acted in obedience to the Local Government Board, and because they *bonâ fide* endeavoured to carry out the duty thrown upon them by Act of Parliament. But it is also declared to be law that any such obedience must be limited by the legal character of the order given, and that the defendants were responsible for keeping within the limits prescribed by the law. "It cannot be supposed," said the learned judge, "that the Legislature

armed the Asylums Board with an option so to perform their duty as to create or not to create a nuisance respecting the rights of others. If this principle were once admitted, it would be difficult to see where the line could be drawn." In fact, the judge gave a virtual adhesion to the dictum which we have before now cited (see "Treatise on the Pollution and Obstruction of Water Courses," by Clement Higgins, p. 134), "the creation of a public nuisance cannot be justified by Act of Parliament." It is the presumption of law that the Legislature cannot intend to legalise a nuisance. The result of this view of the case was an injunction to restrain the defendants from carrying on the Asylum so as to be a nuisance to the plaintiff, a decision which, however good in law, may be held to open the door to a plentiful crop of litigation as to what is or is not a nuisance.

The truth is, that the question raised is only one of those constantly recurring difficulties which are the natural outcome of our enormous growth of population. Sanitary arrangements which, one or two centuries ago, were undreamed of, are now becoming imperative. River pollution, sewage disposal, house inspection, are all parts of the same question as the situation and arrangement of hospitals. If we might venture on a forecast as to what a continued increase in the size of our great cities will, sooner or later, render imperative, it would be this. On the most available spot, where sufficient area can be obtained at adequate price,—as, for example, in the wide sandy waste near Woking,—a large hospital estate should be purchased before it is too late. In this, different establishments should be erected. The London part of the accommodation would then be confined to a commodious and properly arranged receiving-house, articulated with our railway system, from which an ambulance train should daily run to the hospital establishment. There might be some inconvenience attending the carriage of patients, but this would be reduced to a minimum by regularity of despatch; so that a patient could be taken at once to the railway ambulance. Whether difficulty of access to friends would be an unmixed evil may be doubted. But third-class carriages might be attached to the ambulance train at a penny a mile fare for a return ticket. And without underrating other inconveniences, such as that of the more complete localisation of the medical staff, the question will, sooner or later, come on, whether some such plan does not present the minimum of evils.

Apart from the immediate interest of the architect of hospitals, the decision of Mr. Baron Pollock is of no small importance as thoroughly confirming the opinion which we have before ventured to offer as to the effect that the law would give to the complaints of the Thames Conservancy Board with regard to the pollution of the Thames at Barking and at Crossness, by the works of the Metropolitan Board of Works. The application of legal principle in the two cases is identical. The Legislature cannot have intended to give powers which shall so be carried out as to cause a nuisance. All that the Thames Conservancy Board have to do is to prove a nuisance. That done, another precedent is now afforded as to the relief which the courts of law will not hesitate to afford.

Dundee Waterworks.—At a meeting of the Royal Scottish Society of Arts held on the 27th ult., Mr. R. M. Ferguson, president, in the chair, Mr. Alex. Leslie, C.E., read a paper on the Dundee Waterworks. The communication was illustrated by maps and diagrams. Mr. Leslie said, Dundee had now more water than any other town in Scotland per head. Up to 1834 the town was merely supplied by public wells and water-carts. It was then obtained from Newport, on the Fife side of the Tay, but now Dundee was going to supply Newport. The Lintrathen scheme supplied far more water than Dundee was likely to require for many years to come. The works at present gave the town 8,000,000 gallons a-day; and provisions had been made for laying down another pipe, when double the supply would be obtained. The cost of the works, exclusive of the price of land, had been 210,000*l*. Some discussion followed on the subject of the bursting of pipes, it being the opinion of Mr. Leslie and Mr. Coyne, C.E., that the pipes did not get fair play in the hands of the makers, inasmuch as they were unduly exposed to the weather when removed from the moulds.

LEONARDO DA VINCI AND MICHELANGELO.

In his careful study of the life and works of Michelangelo, Sig. Boito* presents us with two lengthy chapters: one, "The Mind of the Man"; the second, "The Character of his Works." It is important, remarks the author, to fathom, first, the mind of the artist by his writings, and then to judge the production of his genius.

Michelangelo cannot be regarded as a facile and abundant writer, notwithstanding the numerous letters and the many sonnets he has left; his nature seems to have had but little power of expansion; the letters, in fact, are cold, the rhymes laboured. The great artist's difficulty in the poetical rendering of his ideas can be traced even in his warmest expressions of feeling to the Marchesa di Pescara,—the noble-minded Vittoria Colonna of Sebastian del Piombo's equally noble portrait,†—in sonnets, for the elegant translation of which we must thank Miss Fanny Bunnett in her "Life of Michelangelo" from the German of Grimm.

In his letters to his father, brothers, and nephews, to his intimate friends, and to famous contemporaries, at all periods of his life, a strange omission of any expression of a love for nature is equally noticeable. The art of Michelangelo, very truly observes Sig. Boito, is concentrated on mankind. In the extraordinary composition of the Sistine Chapel the landscape is confined to the Biblical tree of knowledge, and the ocean of the Deluge; while, in the "Holy Family" (at the Uffizi),—a subject which all his predecessors and contemporaries beautified with distant views of glowing Tuscany,—Michelangelo has merely usurped their place with nude figures.

We recommend to all admirers of Michelangelo Sig. Boito's analysis of the struggles of the great artist's mind, as shown in his various sonnets, the depth of his never-uttered and painful affection for Vittoria Colonna, the expression of that love, and his passionate acknowledgment of its powerful influence.

We are also shown how exaggerated an importance has been attributed to Michelangelo's so-called defence of Florence. Throughout this whole period he appears to have expressed his abhorrence of the war, his desire for peace, and the absolute necessity there was with the artist for its enjoyment; and we learn from a letter written by him to his friend Messer Battista, how, towards the end of September, 1529, he withdrew to Venice, whence he evidently purposed to visit France. Some degree of remorse must have overwhelmed him, however, since at a later date we find him again in Florence, where complete pardon for this desertion was accorded him, the Pope exhorting him to alone consult his own safety, and to continue his work on the tomb of the Medici.

Michelangelo was no politician, and of this fact he was himself thoroughly aware, as we learn from more than one of his letters. The advice he accorded to his relations was, however, at all times just and valuable, and worthy their attention, though it is one of the saddest features of the great artist's life that the ingratitude of his parents and relations should have caused his sensitive nature great pain.

Protected by the favour of the Pope, surrounded by numerous brother artists, Michelangelo more than once complains of his loneliness. He has no friends, nor does he wish to have any, he lives alone, going little out, speaking to no one, and especially never to Florentines, than whom he once tells us, it would be impossible to find people more haughty or more ungrateful; how he combats with his poverty, and how his annoyances weigh upon him, occupying his attention more than his art. And in speaking of his great work of the tomb of Julius II., he complains how painting and sculpture, fatigue, and devotion had ruined him, exclaiming, "Better had I in my youth been a maker of matches!"

Such expressions of melancholy are indeed sad, as the utterances of a nature like that of Michelangelo; let us hope that they were alone the result of that momentary despondency which seems to come over every great mind at some period of its struggle to attain ideal perfection. To a man who felt and saw his life in this despairing mood, a little distraction, as Signor Boito very truly says, was absolutely necessary both for mind and body; and nothing proves more this need than the happiness expressed by Michelangelo in a letter to Sebastian del Piombo, in which he describes an evening spent in the jovial company of his friend Cuio, who, with others of his companions, had obliged the painter to sup with them. Michelangelo, in this letter, glows with the joy which this pleasant recollection awoke in him, as he felt a pleasure in telling his friend the praises he received on that occasion; an action, for Michelangelo, usually but little prone to moments of expansion, full of delicate courtesy.

This letter to Sebastian del Piombo recalls to Signor Boito one of Vasari's anecdotes of Michelangelo, who, having heard that Sebastian was painting at San Pietro, in Montario, a subject in which a monk was represented, remarked that this figure would spoil all; and, when asked to explain his reason, stated that as the monks had ruined the world, which is so vast, it would be but little wonder that one, even, should spoil a chapel so small; and this anecdote suggests to Sig. Boito Grimm's ingenious argument to prove Michelangelo a Lutheran, all which and sundry others, our author, quoting, concludes: — Michelangelo had his art, which occupied each moment of his time, and while, for obvious reasons, he observed certain Catholic forms, it is impossible to say that he was neither Lutheran nor anti-Lutheran, nor even perfect Romanist. He was, above all, a sublime artist. Michelangelo, in sum, notwithstanding the excesses of his style, was essentially of a practical disposition. Certainly, when he poetised,—an art then much in vogue,—abstract ideas were absolutely necessary; and since he had learnt at second-hand (at Florence with the De Medici) in his youthful years some little smattering of Platonic philosophy, not a few ideas were drawn from this source; but, truth to tell, neither the æsthetics of Plato, nor the æsthetics of Savonarola, for the artist, when he works, are worth much. That beauty is a ray of divine splendour which raises the mind to the contemplation of first causes from which it is derived, and of which it is in great measure the recollection,—that beauty is light, that the beautiful is the good, that the good is the true, with other algebraic deductions from these definitions, Michelangelo but little troubled himself; nor would their discussion, indeed, have helped him to create such conceptions as the noble figures of the "Captives," one of the greatest treasures of the Louvre, nor to compose that miracle of art, the ceiling of the Sistine Chapel.

Nothing shows more the little desire Michelangelo possessed to enter into the metaphysics of his art than his reply to Varchi's pamphlet reviving the old disputed question of the precedence of sculpture or painting. After giving all due credit to sculpture, "the lantern," as he termed it, of the painter, "you may patch up a peace between the two," he concluded, "and leave to others such disputes, for more time is spent in them than in doing good work." In this letter the great *maestro* shows the absolute necessity for the painter to be a sculptor, the sculptor to be a painter.

And yet in painting he himself met with numerous difficulties; he writes to his father, during the time that he was at work at the Sistine Chapel, not only complaining of his not having received a groat from the Pope, but expressing his unwillingness to speak to his holiness, since the work was not progressing as he would have liked. Painting, he urged, was not his profession, the difficulty of the work was immense; he bewailed his loss of time, and recommended himself to God.

That this complaint of his small progress should be in connexion with the colossal work of the Sistine Chapel, completed in such an extraordinarily short period, will appear to all strange. This exclamation that painting was not his profession broke from him more than once; while to the mere study of colour and its processes we know he paid but little attention. With Buonarotti painting pleased him the more it resembled his beloved art of statuary, confounding thus improperly the entirely separate natures and requirements of both; and it was this opinion, which he could happily adapt to his conception of the decorations of the Sistine Chapel, that led him to look upon as effeminate the art which formed the glory of Titian. Michelangelo has, indeed, left but few pictures,—the "Fates" at the Pitti, the "Holy Family" at the Uffizi,—stamped with a strangely classic rather than the religious character, which is more evident in the so-called Manchester

* "Leonardo and Michelangelo." Hoepli, Milano, 1879. See *Builder*, p. 90, *ante*.

† Exhibited some years since at Burlington House.

Virgin, so long attributed to Ghirlandaio, but proved by Morris Moore to be the work of Michelangelo.

To love and understand the use of oil and tempera, justly remarks Sig. Boito, referring to the difficulties of Buonarotti, the artist's universe must not alone be confined to the nude. The free and joyous nature must be envied, the sun, its sparkling and obliterating rays, its noble shadows, the verdure of the plains, the grand effects of nature. He must live, like Titian, in a city, rich in the gorgeous draperies of the East; where the churches sparkle in their low-toned gold and choice mosaics; where, in the sombre canals, the furrow of the gondola leaves in its wake a track of shining silver; where every ceremony groups a thousand colours richer than the rarest stones; and where the nude is seen and studied, not its muscles and its strength, but the rosy tints, the livid greens and blues, the delicacy and life which breathe in every member; and never to have to repeat, as did Michelangelo in his old age, that no loss is greater than that of past time.

But the genius of Buonarotti seems little to have desired the direct study of nature; as little did he wish to represent her, and if a motive may be assigned, it was not the incarnation of a long thought-out ideal, not the service of his religion, but the simpler, prouder, more selfish aim which art, in this latter half of the nineteenth century, seems chiefly to desire to carry out,—the revelation of self.

The action, the seeming restlessness which marks so many of his figures, elsewhere writes Sig. Boito, is sublime. He seems in it to unfold the whole mystery of life, the whole wonder of creation. Mankind is so discontented with everything, their minds are so full of ambition, of envy, curiosity, and passion, that the figures of the Sistine Chapel, which, to seat themselves, find scarcely the smallest stool, or in the Medicean allegory, rest upon some uneasy inclined plane, seem the faithful emblem of human existence. These are the true figures of Michelangelo, which possess a startling fascination that makes the marble live again; this is life, this is art indeed. And when, with these noble conceptions in the mind, one turns to the simple truth of the other Quattrocentists, or the gorgeous real truth of the other Cinquecentists, their painting seems but cold, but artificial, and merely ornamental.

And then we follow Sig. Boito through various other criticisms on the Bacchus and the David; on the great master's power of sketching, the value he placed upon his earliest studies; his care in keeping regular accounts, with various other interesting details; among these the record of the only precept which Michelangelo may be said to have left. "Draw," he writes on a letter which we treasure in our British Museum. "Draw, Antonio; draw, Antonio; draw and lose no time."

As a proof of the just appreciation and value Michelangelo placed upon his sketches, we have an interesting letter written from Rome in 1507 to his father, asking him to gather together all his early drawings which might be remaining at Florence, and send them to him; but he adds, as a mother might speak of a child, take good care to so do up the package that it cannot be injured by the wet, and see well that in arranging it, not even the smallest scrap is injured; and especially recommend it to the carrier, and write to me when you send it.

For his statues he usually contented himself with a small wax model, which, as soon as commenced, was reproduced in marble. Blaise de Vigenere, in his "Images de Philostrates," tells us how he saw Michelangelo then more than sixty years of age, and not in very robust health, chip boldly off in a quarter of an hour from a hard block of marble as much as would have taken a good hour for three strong young workmen.

The remarks and researches of Sig. Boito concerning Michelangelo's greatest work, the Sistine Chapel, are interesting, and prove that, even if the stories of Vasari and others are incorrect, the whole ceiling, a space of some 1,700 square mètres (or about 2,000 square yards) was completed in an incredibly short space of time; letters proving that Michelangelo cannot have even thought of the work previous to the middle of the year 1508; months then were spent on the designs for the Apostles, in travelling backwards and forwards between Rome and Bologna, in sending to Florence for workmen to teach him the art of working in fresco; indeed, the artist was alarmed at his small progress. "Holy father," he once remarked to Julius II., "I have told your holiness this art was not mine." And yet we have perfect evidence that the whole work, every figure of which shows the touch of his hand, was completed at the beginning of the year 1513.

But Michelangelo, hard at work on his scaffolding, barely found time enough to snatch a mouthful of food. "Do not write to me," he tells his father, "I have not a moment to spare," though, as an additional surprise, his industry was such that he found time to write more than one sonnet to Vittoria Colonna, who indeed reproved him for his attentions, occupied as he must be with his great work. In another sonnet he tells us, half in joke, half seriously, of his constrained position when at work, his beard in the air, the brush dripping on his face, speckling it "like a rich pavement of varied marbles."

Signor Boito devotes not a few pages to the consideration of the sources from which Michelangelo may have drawn his extraordinary conceptions. Masaccio's works in the Carmine (where we know Torrigiano and young Buonarotti fell out so seriously) can have but little inspired the future author of the Sistine Chapel and the David. Ghiberti, Luca della Robbia, Mino del Fiesole, Donatello, and their works are considered, but as soon rejected, as direct inspirers of Buonarotti. Perhaps Luca Signorelli can alone be regarded as Michelangelesque. Sig. Boito puts forward as the only artist whose works can be compared to those of Michelangelo, Nicoli Pisano; less fortunate than his successor in that only long after his death were the Farnese Hercules, the Torso of the Belvedere, and the Laocoön discovered. Between the two masters were singular analogies, for the consideration of which we refer our readers to Sig. Boito's pages, as also for the history of the famous "mask," the young sculptor's stay under the patronage of Lorenzo the Magnificent, and the first works which showed such extraordinary power, the Bacchus, the Apollo, the David, of whose execution and eventual situation as decided by the sculptor himself after the question had been discussed by a committee composed of more than one interesting Florentine name we have an admirable account.

With an artistic and sympathetic analysis of the famous cartoon of Pisa, the tomb of Julius II., the Moses, and Michelangelo's various religious subjects, Sig. Boito closes his admirable and interesting account of the life and work of Buonarotti, an "artistic study," as the author not unduly terms his book, which will be received with no little pleasure by the refined world of art and letters, as a valuable addition to our stores of treasured information regarding the lives of Leonardo da Vinci and Michelangelo.

THE EXHIBITION AT THE ROYAL ALBERT HALL.

The addition to the list of winter exhibitions by the collection of nearly 1,000 works of art in the gallery of the Albert Hall has rather a formidable sound; but the collection has its specialities which make it worth a visit even to the connoisseur; and to that more numerous class who visit an exhibition for an hour or two of intellectual recreation rather than for criticism, there is a great deal to enjoy. One special point which the critic is bound to notice and give credit for, is the admirable manner in which the pictures have been hung, and which evinces a degree of care and study of the art of hanging (if we may call it so) quite unusual. The works are naturally divided into groups by the architectural subdivision of the gallery, and each of these groups has been so arranged as to combine pictures with a certain relationship of subject, where there was material for that; or, at the least, to combine those which, from their tone and scale of colour, could be placed in contiguity without injuring one another. The result is very successful, and is mainly due to the care of Mr. A. MacCallum, the well-known landscape-painter, who undertook, as a labour of love, this portion of the responsibility. Another special feature observable in the gallery is this, that every picture has on it a ticket giving the subject and the artist's name, so that, although the catalogue is desirable as a record and as giving the prices of the various works of art, visitors who prefer it may get all the information they desire on looking at the picture. This has been done at some cost and pains by the council, and deserves the thanks of the public.

Among the works exhibited, many persons will be interested to find pictures by well-known painters which have been first exhibited some time ago, and not accessible to the public since. Among these we hailed with especial pleasure Sir F. Leighton's beautiful and imaginative group called "Summer Moon," in which, as those who recollect it in the Academy may remember, there is no moon visible, but two female figures steeped in deep sleep on a seat in the moonlight. The title, we presume, was an after-thought, but the work is one of those which require no title, but speak for themselves, appealing to our broadest artistic sympathies, and it has always appeared to us one of the most poetic and imaginative things which Sir F. Leighton has produced. Another work by the same artist, painted years ago, and quite an early work, is his representation of the distress of the Capulet family on finding Juliet apparently dead in her bed after the "potion." There is a certain academical mannerism in the attitudes and draperies in this picture such as the artist has long ago got rid of in more recent works, but there is much energy and vigour in the conception of the scene, and the figure of old Capulet would be remarkable under any circumstances. We do not know when Mr. H. W. B. Davies painted the "Strayed Herd," but it is one of the best and most forcible works of his that we have seen. A brilliant group of landscapes of peculiarly realistic and forcible style is to be found not far from this, including Mr. Brett's large and effective seapiece in a different manner from that in which he now paints, entitled "Christmas off the Irish Coast," and his small and still more powerful and brilliant little view over Dartmoor. This last we take to be a recent painting, it has all that brilliant force of sunlight effect which has marked the artist's later works. Interspersed with these works by well-known names we find some which have the equal interest (in its way) of being good works by names little known to us. We will note a few of both classes in the order of numbering. A little work by Signor Brizzi (94), representing a plough drawn over heavy soil by a couple of oxen, is admirable, and reminds us of what we noticed in one or two of the International Exhibitions of a few years back at Kensington, as to the faculty possessed by some of the Italian artists of to-day in the rendering of animal life in a manner of their own. We see with pleasure Mr. MacCallum's interesting painting of "Untrodden Snow Three Miles from Charing-cross" (in Holland Park, to wit), which may be remembered at a recent Royal Academy exhibition; and a little further on we come to a very pretty collection of still life and flower subjects grouped together, mostly small works, among which, "A Late Rose," by Miss Daintry, "Still Life" (jars, &c.), by Miss H. G. Grace, and "Daffodils," by Miss M. Ludovici, are especially good. Mr. R. C. Leslie's noble sea-piece, "A Last Shot at the Spanish Armada," is a welcome incident; many visitors to the Academy of '77 must remember it, and the remarkably successful painting of the mass of dark water rolling into view on the left. Mr. MacCallum's "Cedar Grove, Chiswick," is one of the best of his works that we have seen; a dark, nearly twilight effect, with the remains of evening light beyond the bronzed masses of the cedars. A large and very admirable landscape by a member of the Royal Scottish Academy, Mr. W. B. Brown, "A Beechwood in Autumn," gives us much pleasure; the large trees which rise from the foreground are carefully studied in character without hardness or excess of detail, the landscape seen beneath their shade is in thorough keeping with the time of year, the beauty of which is intended to be illustrated. Mr. Buxton Knight's fine landscape called "The Sailor's Home," above this, should also be noticed. Mr. W. B. Brown shows his true feeling for nature in another work, "A Breezy Day on the Coast of Arran." Picking out some of the small works in out-of-the-way corners, we were particularly struck with one by Mr. H. Campion called "A Sunbeam on the Moss-grown Pond" (210). This deserves close attention; we have rarely seen bright sunlight and the vivid green of vegetation under its rays given with more reality than in this little painting, which really sparkles, and is good in other points also. Another very charming representation of a certain aspect of light is given in Mr. Wilson's larger work, "Before the Busy Hum of Day," an early morning scene, up the Thames, we should

imagine. Mr. Girardot sends a very pathetic little picture under the title of "The Dark Cloud," which will repay examination in regard both to its feeling and the careful attention to details, which all help the story. Among others of the small works we notice the name of Mr. W. Ascroft appended to two little landscape and figure scenes, the inspiration of which is derived from Mason, and which have much poetic feeling. There are many more pleasant bits to be found in going round the gallery; and the visitor must not forget to descend to the water-colour room on another floor, where besides water-colours are some good pieces of sculpture by Messrs. John Bell, Marshall Wood, Williamson, Lawlor, and others, and a loan collection of china: this portion of the exhibition has been arranged by Mr. Bell. We may mention that among the specimens of sculpture in the principal gallery are to be found Mr. Bell's model for his design for the Albert Memorial (representing the prince as the Christian knight clad in armour and kneeling), and a finely-modelled group entitled "The Deluge," by Count Gleichen.

"THE LOGIC OF ARCHITECTURAL DESIGN."

THIS was the subject of a discourse given by Mr. H. Heathcote Statham at the Royal Institution, Albemarle-street, on the evening of Friday, the 31st ult. The lecture was primarily intended as a popular exposition of the following

Maxims of Architectural Morality.

I. Architecture, being based on practical requirements, can only be true and logical so far as it is in accordance with and expresses these.

II. The plan of the building is the basis of the whole design. A good plan is one in which the various departments are arranged and combined in such a manner as to ensure the greatest convenience and the best possible effect.

III. The exterior grouping and design of a building should arise out of and indicate the interior plan and arrangement.

IV. The architectural design (both internal and external) should arise out of and express the scientific construction or the "statics" of the building.

V. Ornament must be so introduced as either to emphasise the construction or to be manifestly independent thereof; and must be designed with reference to the material in which it is to be executed, and the climate under which it is to be seen.

VI. No feature not arising out of the plan or construction can be added to the architectural design of a building under the pretext that it is "ornamental." Such a feature is an architectural falsehood.

Mr. Statham commenced by observing that if he were asked to define architecture in a single comprehensive phrase, he should call it "the art of building with expression." In order to appreciate rightly the limits and capabilities of that art, it was necessary to bear in mind that it differed from the other arts which appealed to the sense of sight in two very important particulars. In the first place, architecture was an art arising out of practical needs and dependent upon scientific requirements. If we did not want buildings to cover us there would be no architecture, and if we did not build them in accordance with statical conditions they would fall down. In the second place, architecture had no direct reference to any of the external forms of nature. So far as it had reference to nature, it was rather to certain abstract qualities of order, number, proportion; and its relation in this respect to nature rather resembled that of music. Just as music depended upon the setting forth of melody and of harmony in accordance with certain ratios of sound and in relation to a fixed recurring rhythm, so architecture had its rhythm of the eye; and some other points of resemblance were touched upon. The fact that architecture had no direct reference to the external forms of nature was one reason why there was such an absence of definite opinion about right or wrong in architecture. To put the case in an extreme form, if a painter were to draw a figure with two heads, everybody would at once know that he was wrong; but it perhaps might be just as wrong for an architect to put two towers to a building instead of one, though the right or wrong of his doing so would only be seen by a process of reasoning which people would not take the trouble to go through. Architecture was the expression of certain requirements, each of which had its logical relation to the others, and was only a real thing when that relationship was maintained. Only when people considered the relation between the wants of a building and the expression of its architecture, was it possible for them to estimate rightly whether its design was worthy of commendation or the reverse,—whether it was good architecture or bad. The lecturer went on to say that he did not propose to endeavour to evolve a logical architecture out of the depths of his own inner consciousness, for that was what no man and no nation had ever been able to do; but he would illustrate what he had already said by referring to some points in the best and most logical styles that had existed. To take the case of a Greek Doric temple, structurally it was a very simple thing, consisting of a central cell, with a kind of verandah round it formed of upright pillars which carried horizontal beams, which, again, carried short vertical supports, above which was the raking course or slope of the roof. In the first place, it was to be noted that it was owing to the fact that Greece was a sunny and bright climate that the Greek dwelling (of which the temple was probably an amplification) required the shelter of the verandah round it; and but for that fact the Greek column, which had impressed itself upon all forms of European architecture down to the present day, might never have existed. That showed the intimate connexion of architecture with climatic conditions. By the aid of a diagram showing one half the elevation of a Greek temple in its Doric form and one half exhibiting only the primary masses of the construction, the gradual elaboration of the Doric form of architectural expression was traced out, the column especially being adduced as an example of the employment of ornament in such a manner as to emphasise expression, the vertical flutes serving not only to give play of light, but to intensify the vertical expression of the column, while the annulets at the necking served to bind the whole together and give strength to what might be termed the wrist of the column, just as the annular ligature bound together the sinews on the human wrist. Thus was obtained a column which was far more expressive of power to resist forces of a vertical tendency than a round column, and one which also gave play of light and shade, and was decorated by ornament assisting constructive expression. It was, in short, an object conveying the idea of resistance to vertical weight. The architrave or lintel was left quite plain, in accordance with Maxim V., for the addition of ornament to a part of the building which manifestly had to carry a great weight would give an appearance of weakness. The small vertical supports,—the triglyphs,—between the architrave and the cornice were relieved by vertical channels, indicating the direction of the strain. The spaces between these small vertical supports were at first left empty, having, it was thought, served as windows in the domestic habitations of man from which it was supposed that the temples of the gods were copied, more or less exactly, and on a much larger scale. Subsequently, with the development of the architecture, these spaces were filled with sculptured slabs, called metopes, having no structural functions to fulfil; being, in fact (according to Maxim V.), ornament independent of the construction. Passing on to notice Roman architecture, the lecturer said that the Romans, among Europeans, first brought the arch into play as an important statical element in building, but they borrowed their architectural expression from the Greeks, and were so illogical as to keep on using the column, although its function as a vertical support had been given up. The consequence was that the oblique lines of pressure due to arcuate construction were completely disguised by the trabeate expression given to the architecture. The lecturer then went on to show how Gothic architecture,—the architecture of the pointed arch,—had grown up out of the constructive difficulties encountered by the Roman and Romanesque builders in vaulting over large spaces with the round arch, owing to the difficulty of treating a cross-vault of unequal spans with the circular arch, as well as the tendency of the circular arch (on a large scale) to sink at the crown. That the popular idea as to the merely artistic origin of the pointed arch was a mistake was conclusively shown by such instances of transitional architecture as Kirkstall and Fountains, where the large constructional arches of the nave arcade were pointed, and the smaller and merely ornamental arches circular. But the practical origin of the pointed arch was more significantly shown in the development of the vaulted roof, which was illustrated by diagrams showing how this form of arch allowed of the closer adjustment of the curves of the vaulting-ribs, though their complete and logical adjustment was not reached till the form now known as the fan-vault was adopted; which, though it appeared so graceful as to look like a mere plaything, was, in fact, the logical outcome of a long struggle with practical difficulties. A point to be noticed was that while in the earlier forms of Gothic vault the ribs were really constructional, in the fan-vault they had ceased to be so, and were merely an expression, precisely analogous to that of the flutings in the Doric column. A further diagram showed how, by the gradual adoption of the buttress, which was really the wall cut up into sections and placed edgeways to the points of pressure of the vault, the whole design of the Mediæval building became a precise expression of its construction. He then showed, by a comparison of Greek and Gothic ornament, how, in a bright climate, such as that of Greece, and with a material so fine in texture as that of white Pentelic marble, the ornament was naturally of a most refined and delicate character; while, on the other hand, in dull Northern climates, and with coarse-grained stone, the ornament must perforce be bold and vigorous, deeply undercut. Each style of ornament was best suited to its own material and climate. It was owing to the fact that differences of climate and material had been entirely overlooked that "Greek" buildings in London appeared so cold and uninteresting. If we could have Greek sunshine in London, and could find a quarry of pure white marble at Redhill or elsewhere in the vicinity of the metropolis, then we might hope to have Greek architecture in our midst. Speaking of the relation which should subsist between plan and design, Mr. Statham went on to say that the external composition of a building ought to arise out of and express the plan, and that if it did not do so it was a sham. He instanced the Houses of Parliament as a good instance of the way in which the plan of a building might be emphasised by external features, inasmuch as the central octagon, the great rallying-point of the plan, was marked by the well-known central spire, while the grand entrance was dignified by the great Victoria Tower, the other extreme end of the building being marked by the Clock-tower. Each of these great towers was specially designed by Barry for its own distinctive purpose, but yet some people criticised the building adversely because the architect did not put a Victoria Tower at each end of the building. As a practical example of how the plan of a building might be completely disguised by its façade, the lecturer instanced the building in which he was speaking, which, towards Albemarle-street, presented the appearance of a Corinthian temple, with the spaces between the intercolumniations filled with square windows. Internally, the building was divided into a number of small rooms and the theatre, to which the exterior had no relation whatever. As further illustrations of illogical design Mr. Statham cited St. Paul's Cathedral and the new Blackfriars Bridge. St. Paul's was structurally a Gothic building, although externally no one would think so, and the external walls above the nave aisles were merely screens. The huge granite columns surmounting the cutwaters of the piers at Blackfriars bridge were shown to be capable of supporting considerable structures, whereas they now carried nothing. This bridge afforded an apt illustration of the mistake which was often made in engineering designs; but the engineers, who had done, perhaps, the greatest work of any profession during this century, would not learn anything about architectural design, although, at the same time, they would persist in putting "architecture" on to their structures. They seemed to be oblivious of the fact, that if great engineering works were built simply of the materials necessary for their construction, they would often look well without any "dressing," because wherever materials were arranged to resist the physical forces of nature, the structures could not fail to be more or less in harmony with nature. But to

apply architectural ornament illogically to such structures was to vulgarise them. In conclusion, Mr. Statham said a few words by way of practical application of his remarks. He pointed out that, within the last fifty or sixty years we had taken up and imitated various phases of past styles of architecture one after another. First came Roman, then Greek; then Gothic in all its phases was gone through, beginning, curiously enough, with the latest development of the style, and working backwards until something very like Norman work was reached. Now, in the present day, we had arrived at the architecture of that æsthetic sovereign, Queen Anne. A doorway was now made up, perhaps, of a couple of imitation Greek columns, carrying an architrave, frieze, cornice, and other things which had a meaning in their own place, and in stone construction, and then these were surmounted by a pediment, broken in the centre, and the recess filled with a Japanese pot. And that was called "Art in the house!" The reason why these vagaries were practised was that so few people took the trouble to think what was the meaning of the architectural forms which were used, and consequently, they were at the mercy of any architect or any other person who wished to start "a new style" and to get it taken up. Architects were not entirely to blame for this: they must give what there was a demand for. We could hardly hope to have better architecture on a large scale until there was a demand for it, and for that reason it was worth while for cultured people, who had no connexion with architecture, to give some thought as to the meaning of its forms. He was far from going the length of saying that people could not be happy or virtuous in houses which were bad specimens of architecture, but it was, at any rate, worth while for them to endeavour to make the surroundings of their lives bear some reference to actual facts.

The lecture, which was most attentively listened to, was made additionally interesting and clear by a series of sketches which were placed in the hands of every person entering the theatre, and, as a popular exposition of some of the fundamental principles of architecture, was very successful.

THE ELEMENTARY ART EDUCATION OF THE INDUSTRIAL CLASSES.

In a recent number of this journal (p. 65, *ante*) we gave an outline of the organisation which exists in this country for the education in art of the industrial classes. The results of that education can really be only properly arrived at by a careful comparison of the various kinds of industrial work throughout England of which the elements of art form an essential part. Looking around, and observing also the very considerable system of teaching which has sprung up of recent years, we do not observe that knowledge of the principles of art practically displayed which we should expect from the amount of art-education which is spread throughout Great Britain. Be that as it may, we have also another means of taking note of the result of the teaching in question by considering the report of the examiners on the national competition of the works of schools of art in 1877. Of the 138,199 drawings sent up from schools of art and branches, 790 were referred to the national competition, and therefore the chief strong points of the scholars should be fairly noticeable.

The examination on the first day consisted of that in figure-drawing and painting. The competition here, say the examiners, Messrs. Pickersgill, R.A., Yeames, A.R.A., Leslie, R.A., Poynter, R.A., and Bowler, "showed more vitality" than in the previous year, and "less purely mechanical labour." But it would appear that drawings from the antique were less good, and these, it seems, on account of the difficulties involved in determining the comparative degrees of merit where the conditions are dissimilar, were not included in the competition for the gold medal. But they should, add the examiners, "be encouraged by the masters as affording one of the most valuable means of instruction." But if they are excluded from the gold medal competition, it is not very likely that masters will encourage this class of drawings as they should do, because, since there exists a system of payment by results, those who teach will naturally "have an eye" to the most profitable subjects.

Next let us turn to the second day's examination, viz., design, with architecture and modelling. We should say that the results were very far from satisfactory, as will be seen from the report of the examiners, Messrs. J. E. Boehm, Wm. Morris, J. J. Stevenson, Poynter, R.A., and Bowler. "But few examples of architectural design were submitted, and in some of these a want of due relation between the exterior and the interior design was observed, important features of the elevation having no correspondingly important parts in the plan" of the drawings. For the plasterers' work they remark that a large number were "merely geometrical diapers, generally designed in a manner very unfit for the material." Moreover, "the designs showed little feeling for colour: they were either dirty and lifeless when the aim was sober colouring, or crude and violent when bright tints were used." In the examination by the same gentlemen on the third day in design, there seems to have been nothing deserving praise. Of the combinations in the designs for lace, some were "objectionable," and of the damasks some were faulty, from the introduction of too florid curves. The most satisfactory part, indeed, seems to be the paintings in oil and water-colours, in which "the competition was a good one, the groups of still life showing a remarkable general progress." This is a matter of congratulation, but, on the other hand, the progress made in this department, and the apparent want of progress in others of a more practically useful kind, rather tend to show that the results of the teaching of art among the industrial classes is not wholly satisfactory. Because, undoubtedly, one of the chief objects of this education is to increase the knowledge of art among the students, so that it may have a powerful influence upon purely industrial work. So that though we are glad to find such favourable progress in regard to oil and water colours, we should have been more pleased to find that the principles of art were duly applied to such matters as the plasterers' work, for example, to which notice has been already called. An artisan may feel well pleased at being able to put on paper a good water-colour sketch, but if a design for lace "is spoiled by the use of incongruous styles," for example, the teaching and the knowledge of oils or water-colours is, from an industrial point of view, pretty nearly wholly useless. We observe, for instance, that out of the thirteen gold medals awarded, only five were for purely industrial designs, namely two for lace, one for muslin, one for machine-drawing, and one for designs for knives, whilst the remainder were for a group in oils, in water-colours, and so forth. In the award of silver medals, thirty-seven in number, seventeen were for what we have termed industrial art-work. Still, what is being done ought to improve the character of English workmanship, and raise the intellectual standard of the workman, which is one of the greatest benefits which it is to be hoped may be derived from art-education. Moreover, the quantity of artistic literature diffused throughout the country in prizes ought also to be a potent factor if the teaching in the schools is really thoroughly imbibed. Thus, for example, 100 copies of Tyrwhitte's "Pictorial Art" were distributed in prizes, and 82 of Flaxman's "Anatomy," and these ought not to be seed sown in a wholly barren soil. Still, when we consider the general character of English industrial art-work at the present day, we cannot, taking it as a whole, honestly say that we see results in it adequate to the money, the time, and the labour, which are spent in the system of art education which we have been noticing.

South London Working Men's College. A lecture on "Healthy Houses" was given at the above institution on February 4, by Dr. W. H. Corfield, to a very attentive audience. The chair was taken by Mr. M. H. Judge, who, in thanking the lecturer, alluded to the free library and reading-room lately established in the rooms of the Working Men's College, Kennington-lane, and to the need of funds being provided for its support. He added that the reading-room was supplied with every important London newspaper and periodical, and that the books of the library were lent for home reading; but that hitherto the expenditure had been very far in excess of the income. The free reading-room and library, the only one in South London, is open daily from ten a.m. till ten p.m., and on Sundays from six till ten p.m.

A PRACTICAL ITALIAN WORK ON HOUSEHOLD COMFORT.

Of the many countries which have watched with more than ordinary interest the successful results of the Paris Exhibition of last year, Italy has been by no means one of the least observant. Within a month's time after the doors of the twin palace of the Champ de Mars and the Trocadéro had been closed, and before even the visitors from all parts of the world had reached their distant homes, bearing with them the recollection of the marvels of the Exhibition, appeared at Milan three works by three well-known Italian authors, each of whom has given an excellent account of Paris and the great show.

In the "Ricordi di Parigi" of De Amicis, and the "Lutezia" of the eminent Genoese novellist Barrili, the subject of the Exhibition has been merely the peg on which to hang much interesting information, particularly connected with Paris, its wonderful museums and celebrities. The third work is of a different and essentially original stamp. The title of the book alone is sufficient to explain its nature, "Novelties of Industry applied to Domestic Life."*

The Cavaliere Antonio Caccianiga, the author of this work, is well known and highly esteemed in Italy, not alone as Deputy for Treviso, but as a successful literary man, all of whose writings, whether of a serious or amusing nature, are stamped with an ardent desire to show his native country, only so recently emancipated from the power of ignorant principalities, the necessity for industry, the value of labour, of education, and development of agriculture, the charms of country life, and the sacred nature of domestic affection.

This, his most recent work, bears evidence, even in a more marked degree, of Sig. Caccianiga's desire to form, or rather reform, Italian character. The mere enumeration of the chapters and their contents would suffice to show the nature of the broad and practical view Sig. Caccianiga has taken of the Paris Exhibition and its contents, and the result is a book in which he lays before his countrymen all the modern appliances and recent improvements invented and exhibited by the world, to increase the ease, the health, and comfort of every-day existence.

Italy, once the land of the highest degree of refinement, the instructress of the world in taste and luxury, is now so far behind the rest of the globe in availing herself of the practical results of modern progress, that Signor Caccianiga's book will serve as a valuable guide to many, who, as he himself says, are not even aware of the comfortable, easy habits of the rest of mankind.

The official catalogue of the Exhibition consists of eight large octavo volumes; but, on a much smaller scale, Signor Caccianiga's work comprises a complete compendium of the comforts of every-day existence. The object of the book cannot be more clearly stated than in this sentence which occurs in the Introduction:—"To render the house more beautiful by every possible means, to make it an attractive home, is the surest means of reforming our habits, and of improving and refining our natures, and of making mankind better and more happy. With this end in view we have visited the Paris Exhibition, and have studied in every branch of industry all which seemed to us to concern the economy, the æsthetics, the hygiene, and comfort of the household. If the chief aim of all study, of all philosophy, of all politics, is the greatest possible happiness for the greatest possible number, its chief germ lies in the family circle, which is the basis of society; its foundation is in the house, which forms the nucleus of the city and of the State. The man who lives honourably in his family, and who works steadily for its happiness, increases both the moral standard and the wealth of the nation."

And here we have before us a number of valuable dissertations on the kitchen, the pantry, the reception-room, the study, and the dressing-room, on medicine and hygiene, on clothing, on the care of children, on the country-house, on domestic animals, on instruction and culture, on lighting, heating water, and ventilation, with various other chapters on the best building materials, on furniture and other domestic subjects, treated in the gayest possible

* "Novità dell' Industria applicate alla Vita Domestica," by A. Caccianiga. Published, as also the other works above mentioned, by the Fratelli Treves, Milano, 1879.

manner; instruction and interest afforded which never flag for an instant, a sentimentality never carried too far, a serious tone not too profound, together with a mass of useful information and advice which will render the book acceptable to every order of reader.

The work is the production of an accomplished and thoughtful writer who has taken into consideration, in an impartial and agreeable manner which cannot too highly be praised, all the many features which make up the household, from the most serious matters to the most minute. The opportunity afforded by the Paris Exhibition, of examining and noting down the more recent improvements and inventions from all the countries of the world, has given Sig. Caccianiga the means for laying before his readers an entirely new set of hints and ideas. "Realism," as the author remarks, "has an incontestable merit when it can be rendered useful to the family and to society; to belong to the present day we must make idealism practical and realism ideal."

But Sig. Caccianiga has had another end in view in his excellent work,—to hold before his countrymen, and thus incite them to progress by the wholesome spur of emulation, the efforts and success of the rest of the world; and his concluding chapter is a homily, which contains many valuable precepts, lengthy quotations of which might be made, did but space allow. "Every country," remarks the author, in a sentence which applies essentially to the position of England at the present moment, "every country is worth alone what its people are worth. Where they are educated and laborious, the vitality of the nation is ensured. It may temporarily succumb through an accumulation of fatal circumstances, but cannot die. Intelligence and labour will repair the losses, and restore the old prosperity and power."

Throughout the work Sig. Caccianiga rarely loses an opportunity of giving full credit to England for the important part she has taken in the civilising crusade of the present age, in which France and America have also taken so large a share.

We learn that a French translation is about to appear at Paris of Sig. Caccianiga's work, while an English translation has also been authorised. Sig. Caccianiga's book will be of service to many as a technical, literary, and practical treatise on moral and material life, making known all the most important novelties of industry that serve to increase the comfort of domestic life.

THE SANITARY STATE OF CHISELBOROUGH.

MANY of our readers may remember that towards the close of the year 1872 we published some articles on "The Houses of the Labourers in Somersetshire." Among other villages, we described sights and scenes witnessed in Chinnock, Chiselborough, Montacute, and Stoke-sub-Hamdon. We gave views also of a few of the cottages in the villages we visited. Our picture of ill-fated Chiselborough did not at all please the then and still present rector of the place. He sent us a letter, which we published at the time, giving what he called some "modifying facts" which were to be weighed in the face of our statements. The rector admitted in his letter some of the cottages were doubtless faulty, and that some of the worst belonged to the occupiers or to owners equally poor, but he held, with regard to Chiselborough, that "so large a proportion of hearty, healthy men and handsome girls could rarely be met with elsewhere." The rector was not content with sending to the *Builder* a modifying letter, but he took the opportunity of addressing to the *Times* a letter of a more combative character, and some of the local journals of his district seemed to have been inspired to state matters which were not, like our details, based on personal observation. Be that as it may, we are glad to see that the reverend rector of Chiselborough has at last become conscious that the people under his pastoral care are not well housed, and that no surprise need be felt at the low moral and physical condition of the inhabitants of Chiselborough. Although it has taken seven years to make a sanitary convert of the rector, better late than never. We are told there is light which has left some distant stars three thousand years ago, which has not reached this world yet. The rays of sanitary science have taken long to travel, and are only now reaching sundry places in the British Islands. But to the point. A few days ago a letter from the rector of Chiselborough was read at the Yeovil Board of Guardians. The writer said,—

"May I beg you to direct the attention of your inspector to the condition of a cottage in this village, occupied by Charles Hallett, and owned, I believe, by a person named Langdon, living at Preston, near Yeovil? It does not seem to be fit for human habitation, and the adjoining one is scarcely better. There are some other cottages just above these that are in a despicable condition, and I can feel no surprise at the low moral and physical condition of persons whose surroundings are so depressing."

Mr. Templemen bore testimony to the bad state of these cottages, and remarked that he believed the thatch was off one of them. The Clerk was instructed to send a copy of the letter to the sanitary inspector (Mr. Langdon).

A few words now from our description in relation to Chiselborough in 1872:—"No external sketch of the habitations in this place could give a complete idea of the state and condition of the interior, or the deplorable life of the labouring inhabitants. The village is the home of an unhappy race of human beings, whose frightful afflictions are unquestionably attributable to the place and circumstances. . . . The maladies that these unfortunate creatures suffer from are goitre and cretinism. The existence of such a place is a disgrace to our boasted civilisation. . . . In times of heavy rain the natural outfall of the drainage of the hillside is the floor of such cottages. Further, year after year the contents of cesspools have been allowed to sink into and saturate the soil, the foul drainage in connexion with one set of houses percolating through the soil under the walls of the houses below them. The wells and other means of water-supply for the inhabitants in the lower portion of the village suffer necessarily from the foul filtration we have been describing." We gave full details of the social and sanitary state of the place, and, therefore, we were obliged to draw a rather unprepossessing picture of the features and physical condition of a number of the people. After seven years, it is somewhat disheartening to hear from the mouth of the rector (though church matters and school organisation, singing assemblies, and clubs may have improved the society of the village), "a low moral and physical condition" still exists, and that the cottages of the poor are in a "despicable condition." Verily, the Sanitary Authority in Yeovil must be somnolent, and the sanitary supervision of Chiselborough and other analogous villages perfunctory. The "primrose-belted" village will not be disinfected by the odour of the wild flowers, no matter how plentiful they may be, and sanitary teaching and sanitary work must be made to accompany spiritual instruction; for cleanliness, as the proverb says, is next to godliness.

SHEFFIELD AND ITS SANITARY CONDITION.

As regards its sanitary state, Sheffield, which is suffering most acutely from the depression in trade, appears also to be in a deplorable sanitary condition. A report has just been presented to the Town Council by the Health Committee with regard to that portion of the town known as Nether-Hallam, which reveals a shocking and revolting state of things as existing in one of the most important towns in the kingdom. The report states that many of the cottages in that district, though only erected a few years ago, are now in a state of dilapidation, and ought to be closed. Many others are likewise in a sad sanitary condition, and are brought under the immediate notice of the new Medical Officer of Health. One street in the neighbourhood is described as one vast piggery. Almost every one is said to keep pigs, the styes being close to the houses, and, in summer especially, the air is charged with malaria and miasma, which spread fever of a most malignant character through the district. The report states that steps have already been taken to abate this part of the nuisance. The drains in the district are reported as being all defective, and emptying themselves on land where the refuse water stands until it becomes offensive. In the case of one house in which eight deaths had taken place from fever, it was found that under the floor of the kitchen was a large cistern, intended to receive the rain water from the roof of the house, and this water was used by the occupiers for drinking and culinary purposes. On examination it was found that the water from the slop-stone, that had been used for washing and all other purposes, found its way into the cistern. It appears that the council has been without a Medical Officer of Health for upwards of five months.

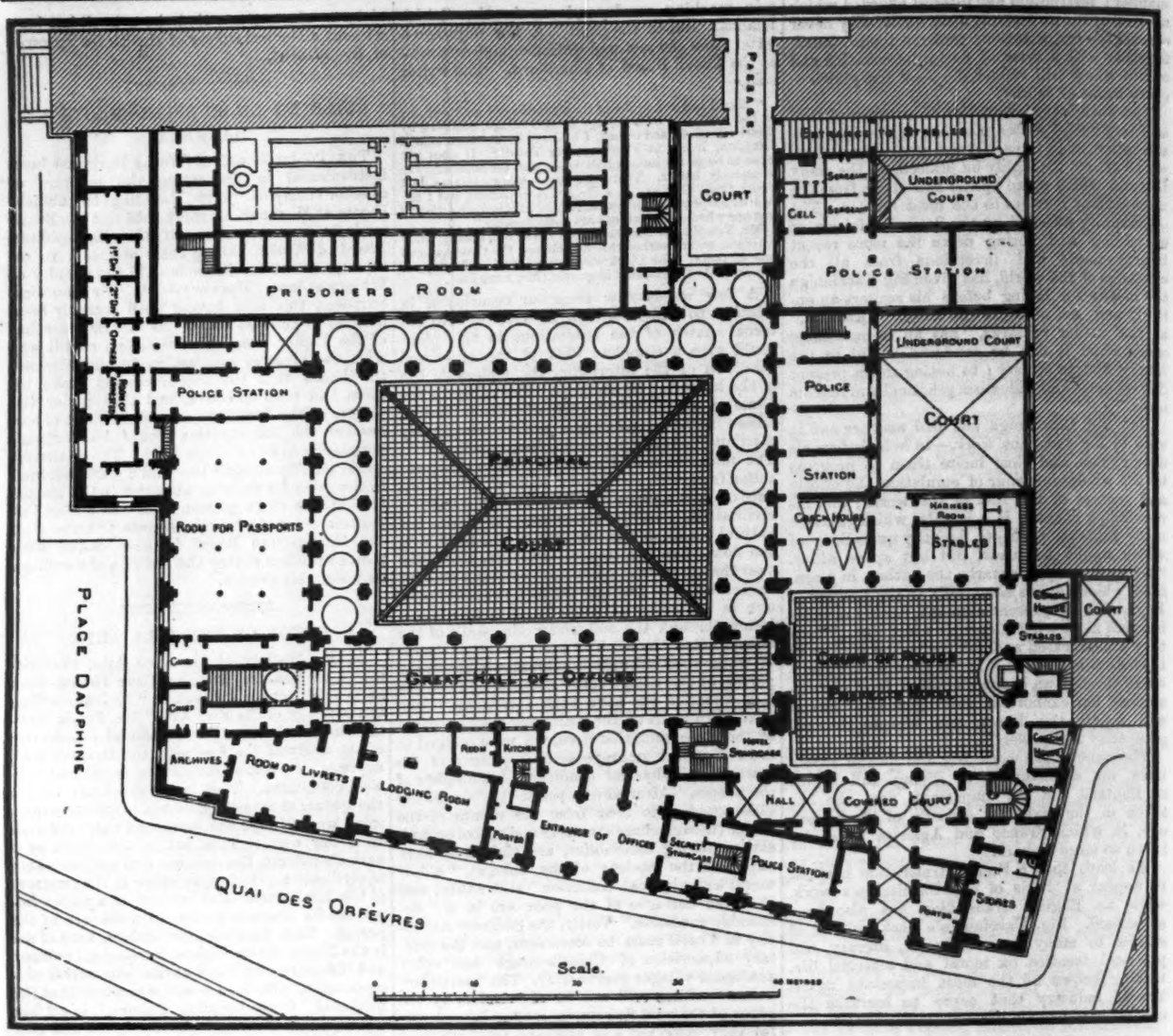
BUILDING ON RUBBISH-SHOOTS AT HACKNEY.

THE Poplar Board of Works have just been instrumental in preventing the erection of another colony of "jerry" buildings on rubbish-shoots at Hackney. A short time ago the Board made a representation to the Metropolitan Board of Works, calling their attention to an attempt to utilise some land in the vicinity of Whitepost-lane, Hackney-wick, for building purposes, this land having until recently been used as a rubbish-shoot. At the last meeting of the Poplar Board the chairman said it was with the greatest satisfaction that he informed the Board that the representation made by them had been effective, and that under the powers of the Buildings Amendment Act of last Session the Metropolitan Board had refused permission to build on the land. The chairman added that he thought the public were indebted to the press for drawing attention to the matter just at the right moment. It was a most important thing for public Boards to know that the Metropolitan Board is now vested with power sufficient to stop the erection of dwellings on unsuitable ground.

STUDY OF THE FINE ARTS.

AT the Society of the Fine Arts, Conduit-street, on Thursday last, Mr. Cave Thomas took as the subject for a discourse "An Introduction to the Study of the Fine Arts," Mr. Frank Rowland in the chair. The successful prosecution of the study of the fine arts, the lecturer said, depends on certain favourable social and political conditions. That in the great art epochs the system of art education and of art encouragement were always the same, and quite different from our own. That art is the index of a nation's culture, the outcome and not the cause of civilisation. That every stage in the progress of the intellectual development of a nation impresses its characteristics upon the art of the period. That the finest, the highest, kind of art is the flower of the highest intellectual culture, and therefore only found at the culmination of a civilisation. He then went on to show that the motive of "Great Creating Nature," in all her works, is that of adaptation to purpose, and that the artist, as the imitator of nature, as creative in a lower sphere, is most successful when actuated by the same motive. That the fine arts are adaptations to the senses and intellect of man. He also pointed out the fallacy of the notion that any production of nature must necessarily be beautiful though perfectly adapted to its purpose; that its being beautiful depended upon whether it was also in conformity with man's sensuous nature. He then drew attention to the fact that the whole tendency of scientific investigation goes to prove that the form of our knowledge is quantitative, and capable of being mathematically expressed. That the mean is the stable pole about which every species of phenomenon fluctuates,—is the mathematical expression for rectitude in nature, of the good in morals, and of the beautiful in nature and in art. That if the form of our knowledge be quantitative, all our knowledge is fundamentally that of proportional relation, and the doctrine of adaptation to purpose resolves itself into that of adaptation of proportion to purpose. All art is intrinsically proportioned adjustment, not only in respect to form, but to colour, &c., and its principles are, therefore, capable of being mathematically formulated. Mr. Thomas seeks to establish the principles of the fine arts on a sound scientific basis, and has for many years been working to this end.

The Electric Light in a Salt Mine.—The practical utility of the electric light for illuminating salt-mines was tried in Messrs. Verdin & Sons' rock-salt mine at Marston, in Cheshire, on the 23rd ult., experiments being conducted by Messrs. Welch & Scott, of Manchester. The mine is one of the largest in England; its capacity is about seven or eight acres, the roof being supported by natural pillars of rock-salt. In the experiments the electric light was generated from a Siemens machine, the motive power being derived from Marshall's special electric engine. The result is stated to have been satisfactory.



THE NEW PREFECTURE OF POLICE, PARIS.—*Ground Plan.*

THE NEW PREFECTURE OF POLICE, PARIS.

Though M. Jules Simon once wrote that "the only stroke of the pickaxe he could forgive was that which struck down the Bastille, because something else fell with it," yet we are glad to find that he extended his pardon to the act of demolishing the old Prefecture, describing it as "filthy and loathsome"; which, as M. Jules Claretie observed, "greatly annoyed the rats, who regretted the residence of their ancestors, and complained bitterly of the conduct of M. Le Préfet de la Seine." The improvements carried out on the "Island of the City" necessitated the demolition of a part of the dismal Place Dauphine, and the ridiculous column to the memory of General Desaix. In this work, however, the Commune took part, but from different motives than those which actuated the Municipal Council; and here we are reminded of what another French author wrote (Edmond About), "Dans les Ruines." "Wanton, useless destruction," he writes, "horrifies me, and I feel, if I turn to look upon the scene, that my eyes are accomplices to the act; but those who raze to the ground a dirty, unwholesome quarter do not destroy for the pleasure of destroying, they clear the space, and better and finer buildings are constructed upon it. This creative destruction I admire and applaud." Paris owes to this "creative destruction" its finest avenues and boulevards, some of its most refreshing "*parcs*" and public gardens, and many of its noblest edifices, while the useful has not been lost sight of.

The new Prefecture of Police may be reckoned amongst the former, and it certainly ranks with the latter. The architect, M. Diet, has had no small difficulties to contend with; the building was originally intended to be on a much larger scale, stretching from the Rue d'Harlay to the Boulevard du Palais, but on account of the cost of the late war, he had to reduce his plans by nearly one-half; the consequence is that, owing to the large increase of the *personnel* of the Prefecture, some of the business has to be transacted at the City barracks, where probably at some future date the whole of the service will be administered, and the Court of Appeal established in the present new building which adjoins the Palace of Justice, having its frontage on the Quai de l'Horloge. It was commenced under the Empire, and formed part of the plans of Baron Haussmann, who entrusted its design and construction to M. Diet. Amongst other buildings worthy of note by the same architect, we may mention the Museum at Amiens, the Hospital for Lunatics at Charenton, the Veterinary School, Alfort, &c. The new Prefecture of Police is a plain but elegant stone construction, built at a cost of 220,000*l*.

The oblique lines on the left side of the plan show the towing-path at the side of an arm of the Seine.

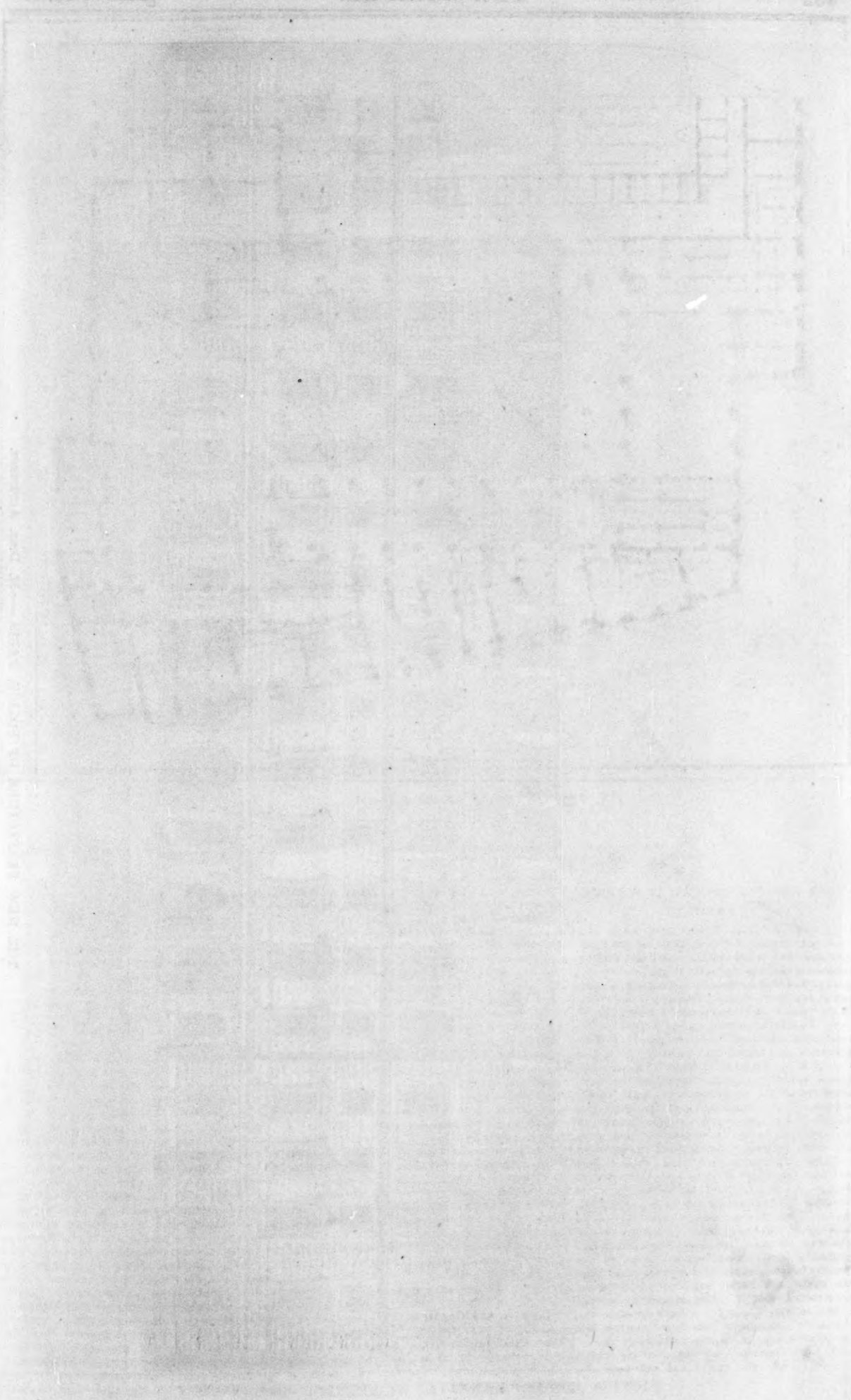
Look to the Cornices.—A piece of stone, weighing ¼ cwt., fell from the cornice of the Town Hall, Ipswich, a few days since, striking a man named Davey on the head and killing him instantaneously. The fall was caused by the frost, it is said.

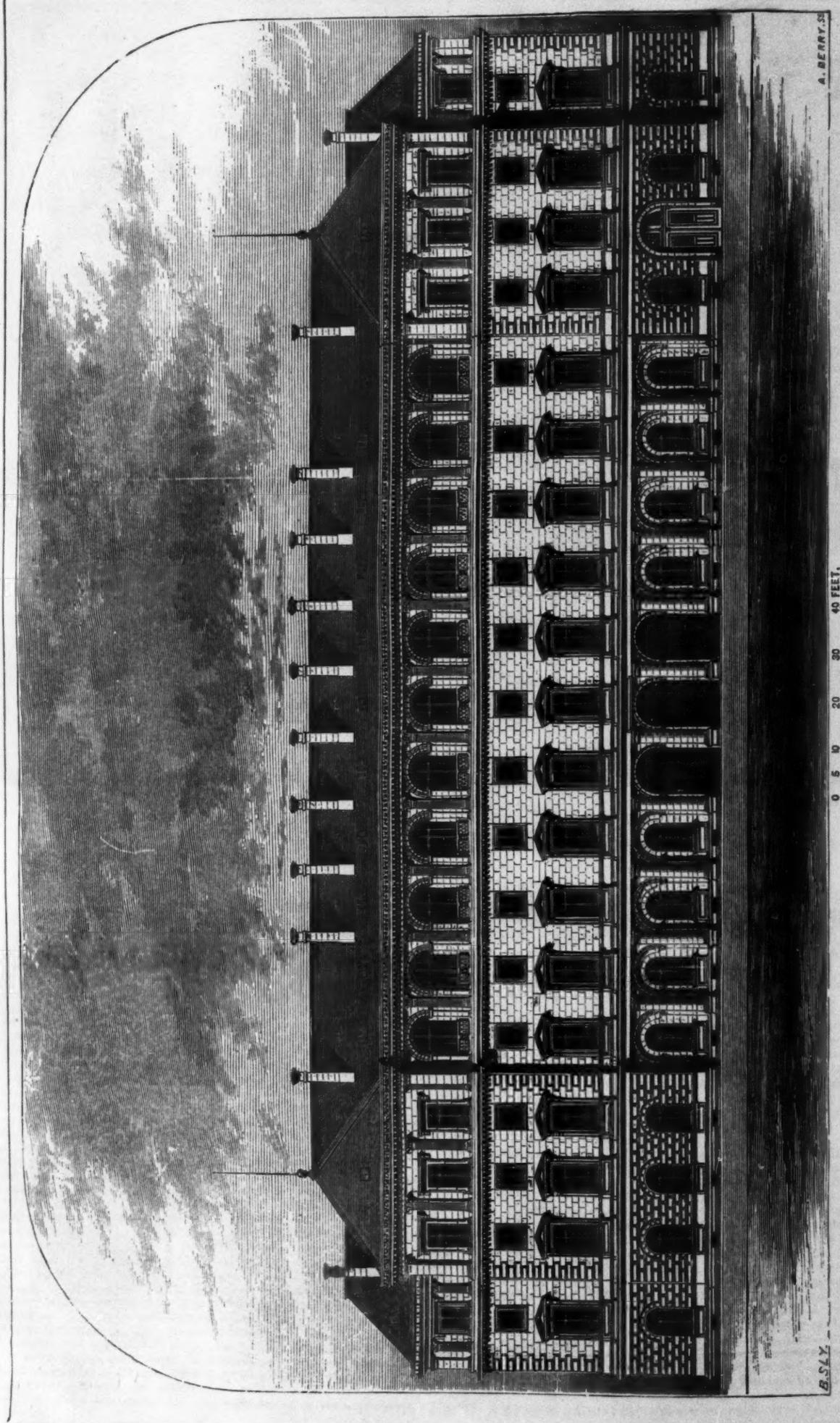
THE OXFORD CHANTRY AT LAVENHAM.

AN ARCHÆOLOGICAL PUZZLE.

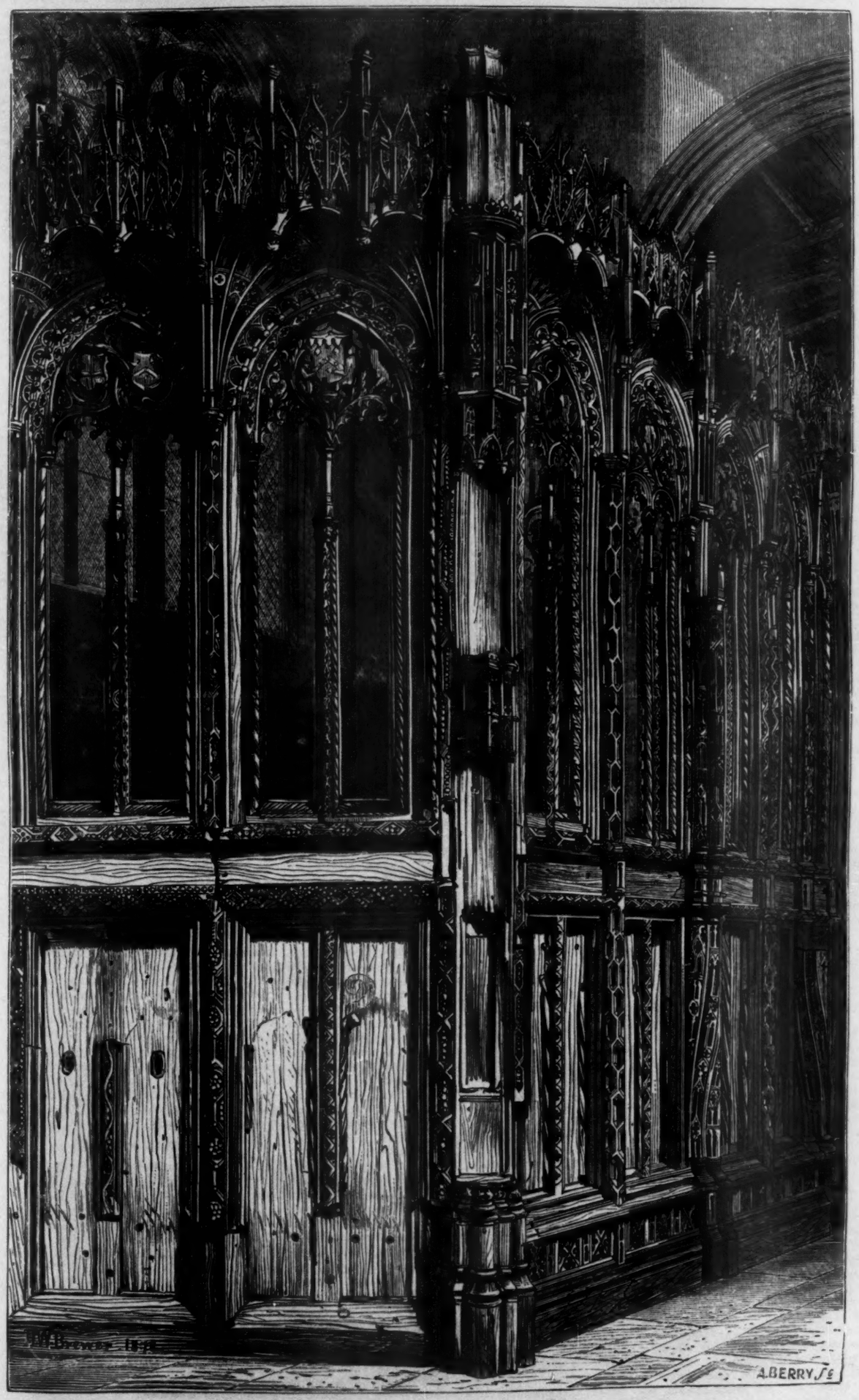
There are few more interesting little towns in England than Lavenham, in Suffolk. Many of the houses are excellent examples of domestic architecture of the sixteenth century. There is a capital old cross, and the parish church is one of the finest examples of Perpendicular work in England. It consists of a nave and aisles, of six bays; a lofty western tower, a chancel, and two large side-chapels; a south porch, and a very curious and interesting vestry at the east end. The whole building is Perpendicular, of a very rich and late type, with the exception of the chancel, which is late Decorated.

The church is said to have been built partly by the De Veres, Earls of Oxford, and partly by a family of the name of Sprynge (or Spring). The porch and the large south chapel were erected by John De Vere, and are inscribed with the dates 1525 and 1527. The roofs of the church are richly carved in oak, and the fittings and furniture are of the most interesting description. The rood-screen and side screens of the chancel are Decorated in character; but the stalls, parcloses of the chapel, and the two chantry chapels of wood, miscalled the "Oxford" and "Norfolk" pews, are probably of the same age as the nave of the church. Our illustration, which is from a drawing made on the spot, represents the Oxford "chantry." For there can be little doubt that, previous to the Reformation, these so-called "pews" were, in reality, the private chantries or chapels of the De Veres, and probably of the Springs. Unfortunately





THE NEW PREFECTURE OF POLICE, PARIS.—M. Dietz, Architect.



THE OXFORD CHANTRY, IN LAVENHAM CHURCH, SUFFOLK.

the date of both these works is unknown; nor is any reliable information to be obtained concerning them. Both of them, but more especially the Oxford chantry, exhibit most singular features of design and execution; it is difficult to say for certain whether they are the works of Englishmen or of foreigners. But the Oxford chantry bears so strong a resemblance to the screen-work round the tomb of Henry VII., and to the canopy-work over the stalls of Henry VII.'s chapel, both of which are usually ascribed to Flemish workmen, that it is possible that these two chantry chapels may be works of the very same men who were engaged upon Henry VII.'s chapel. We are the more led to this supposition from the fact that these two chantry chapels bear no kind of resemblance to any other woodwork, either in Lavenham Church or in the neighbourhood, not only as to their design, but also as to their construction and the manner in which the details are executed. All the carving attached to the other screen-work in Lavenham Church is cut out of the solid, but in these two chantries it is made up of separate pieces of wood, which are stuck together with a kind of glue, and then attached to the main structure by wooden pegs, or fitted into grooves something after the same manner as that adopted by modern cabinet-makers. The work, too, is far neater and more free from irregularity of execution than is usual with English work of the period; then, again, the tracery and mullions are all twisted, and, instead of forming regular curvilinear patterns or rectangular openings, the tracery is formed by interpenetrating scrolls, which break off and end in foliage a little beyond the point of interpenetration. Shields are introduced into the tracery; they are upheld by nude figures, very spiritedly executed, and partaking more of the characteristics of Renaissance than of Gothic sculpture. We should have no hesitation in ascribing the whole of this work to Flemish sculptors were it not for the curious kind of fan tracery supporting the upper canopies. However, it must not be supposed that this is at all like ordinary fan tracery, as the pendentives, instead of being semicircular in plan, are very much flattened so as to form a kind of half oval, and the transverse bars of the tracery, instead of being level, rise very much towards the centre; in fact, the whole forms a kind of constructive perspective. This has been so skilfully done that it is difficult to understand it from a drawing. The reason of this treatment is obvious. Had this fan-tracery been set out in the ordinary way, the excessive projection of the canopies would have made the whole composition look "top-heavy." On the whole, we are inclined to think that notwithstanding this fan tracery, the work is Flemish, and not English.

Remains of colouring are to be traced in the hollows of the cornices, but as far as can be found out, it seems only to have been used sparingly, and not to have been carried over the whole body of the work, or even over the panels. This again, is a very un-English treatment. In fact, the whole thing is an archæological puzzle, and in the absence of documentary evidence we can only hazard a few conjectures founded upon the history of works which exhibit features of somewhat similar character. A good deal of the carving which adorned the lower panels has been taken away, and much of that which is left is loose, so that it might easily be removed by those mischievous persons who are in the habit of collecting *souvenirs* of their visits to celebrated buildings. These loose fragments should be immediately made secure with wooden pegs, or even with glue.

The Strike in Glasgow.—The 400 riveters who struck work on the Clyde last October against a reduction of 7½ per cent. have now petitioned to be taken on at the reduction. The masters have replied that the work they left is now being efficiently done by apprentices, or rather by men not formerly instructed in riveting, and by non-union riveters. If, however, any more men are needed, employment will be offered them; but the non-unionists will be retained in any case. The immediate results of this strike have been the loss to the 400 men who struck of about 14,000*l.*; the loss of very much more to some thousands of others who, but for their action, would have been engaged in the shipyards; the loss to the district of several contracts which have had to be declined; and the great increase in number of the so-called unemployed.—*Glasgow News.*

HOTELS AND RESTAURANTS.

ARCHITECTURAL ASSOCIATION.

At the ordinary fortnightly meeting of this Association on the 31st ult., Mr. H. L. Florence, president, in the chair,

Mr. F. J. Francis, F.R.I.B.A., read a paper on "Hotels and Restaurants." He commenced by observing that the stately hotel, with its vast dimensions, architectural pretensions, and luxurious fittings, was confessedly an offspring of but recent date, and the same was to be said of the modern *restaurant*, where, without the introduction of any hotel accommodation, the public had all the tempting appliances of the best cookery, served under circumstances of extreme luxury, and in apartments frequently of great architectural elegance, and with decorations that were only equalled in the houses of the wealthy, or the gilded *salons* of the modern club-house. The American hotel was of enormous dimensions. It was built of granite, brown sandstone, or white marble, and was seven or eight stories high. It had bedrooms for 1,000 or 1,200 guests, in all of which hot and cold water was laid on, and gas provided. It had spacious dining and drawing rooms, reading-rooms, refreshment parlours and bars, barbers' shops, and baths, and everything on the same scale. It had a kitchen capable of furnishing four meals a day for 1,000 people; and a steam laundry, in which the visitor could have his stock of soiled linen washed, dried, starched, ironed, and returned to his room in two hours. All the ingenuities of modern invention were brought to bear in these vast buildings to abridge manual labour, including half a dozen lifts for passengers and luggage. Just as the large and well-appointed hotels of the present day had superseded the dingy lodgings formerly offered by hotels, so the modern *restaurant* might be said to have superseded the dirty coffee and chop houses which used to be so prevalent. His (Mr. Francis's) firm had been engaged in the construction of several high-class *restaurants*, and he would, therefore, give some particulars of four of them, viz., Crosby Hall, Bishopsgate-street; the King's Head, Fenchurch-street; the Holborn Restaurant; and the "Palmerston," Old Broad-street. In 1867 *Crosby Hall* came into the hands of its present proprietors, and from the plans and under the supervision of Messrs. Francis it underwent a complete metamorphosis to adapt it to its new uses as a *restaurant*, and subsequently an important addition was made on the northern side by the acquisition of additional ground. Having given a sketch of the history and structural vicissitudes of the building since the time of its erection in the middle of the fifteenth century by John Crosby, an eminent citizen, Mr. Francis said that the works to the original structure were carried out in 1868, and in 1873, upon an additional space of ground acquired, new buildings, in accordance with the style of the old building, were erected, faced externally with stone, and with the interior decorated similarly to the remainder of the structure. The main entrance is in Bishopsgate-street, leading to the council-room, which is appropriated as a capacious luncheon-bar, as is also the whole of the ground-floor of the extension. The floor throughout is laid with encaustic tiles, and the walls are decorated with oil-colour paintings representing scenes in English history, either connected with Crosby House, or contemporaneous therewith. The ceilings are panelled with Tudor enrichments, the whole overlaid with polychromatic decoration. In the banqueting-hall, little was needed to bring out the fine proportions and superb detail forming the original building. An unsightly gallery had to be removed, but the windows were intact. The exquisite bay window, with its beautiful groined ceiling, required nothing but cleansing, as was also the case with the fine roof, with its transverse and longitudinal ribs and rich traceried insertions. The Mediæval smoking-room consists of a large parallelogram-shaped apartment, with an arched recess on the eastern side, lighted with deeply-recessed Gothic windows, and a large oriel window at the north end. Great care has been taken with the ventilation of this room by providing fresh-air inlets behind the skirting, separate flues in the chimney-breasts, and perforated panels, forming distinct air-channels, in the ceiling for carrying off the foul air. This apartment is also decorated with wall-paintings representing historical scenes. The kitchen department occupies the second and third floors of the building, and the kitchen ranges, hot-plates, gas-stoves, and steam-boilers, though not spread over a large area, are well placed for their work, and facilitate economy and regularity of service. There are two sets of double-acting lifts from the kitchen, having deliveries at the luncheon-bars, the banqueting-hall, and the throne-room. The steam-boiler serves the auxiliary purpose of warming and ventilating the smoking-room. The *King's Head Tavern*, at the corner of Mark-lane and Fenchurch-street, might very well claim to be an example of the earliest of those places to which London's citizens resorted for rest and refreshment. It had the honour of a visit from Queen Elizabeth, on the occasion of her release from the Tower. The old building, altered and cut about, with its inconvenient kitchen on the ground-floor, and its irregular-shaped rooms and low-pitched ceilings, was not capable of being satisfactorily converted into a spacious modern *restaurant*, and Messrs Francis were therefore commissioned to entirely take down and rebuild the premises. It was considered desirable to have a double basement, as the locality is in the centre of the wine trade, and the lower story was carried to a depth of 20 ft. below the street-level. The vaults were erected at the outset of the work to form a proper abutment for keeping up the roadway, and fireproof flooring, on Fox & Barrett's system, was adopted, both for the ground-floor and upper basement. The lower basement floor was asphalted, and the asphalte was also laid vertically on the walls, to prevent access of damp to the cellars. The principal entrance is in Fenchurch-street, and leads at once into a lobby, from which, on the right, immediate access is obtained to the luncheon buffet, 60 ft. long and 20 ft. wide. The mural decoration adopted for this room shows what may be effected by the use of art tile-painting for internal ornament. There is no building in London in which this kind of tilework has been so extensively introduced as in that forming the subject of this notice. The whole of the tile-work in this room, as also that on the marble staircase, the first-floor vestibule, the Queen's dining-room, and the smoking-room, have been executed by Mr. Alexander Gibbs, of Bloomsbury-street, and possess considerable artistic merit; and although the original cost is considerable, yet, being of so enduring a material and so readily cleaned, it may be safely commended to notice and adoption. In the arched recesses in the luncheon buffet, the art-tile paintings illustrate the plays of Shakspeare. The counter-front, the panelled ceiling, and the gas lanterns and pendants,—the latter by Messrs. Verity, of King-street, Covent-garden,—are all designed with special reference to the architecture of the building. Underneath the luncheon buffet, and approached from a staircase of good proportions, is the chop and grill room, 62 ft. long by 20 ft. wide, thoroughly ventilated by windows at each end, and also by a ventilating cornice all round the room, communicating with a large vertical zinc tube running to the top of the building, connected with the flue of the grill, and ventilating the room. A Sicilian marble staircase, 6 ft. wide, leads to the Queen's dining-room, which is on the first floor, and is 60 ft. long by 30 ft. wide, without any internal piers or columns. The ceiling of this apartment is composed of a series of geometric panels, with foliated enrichments, and the walls exhibit a series of illustrations, in art tiles, of Tennyson's works. The gas chandeliers were supplied by Messrs. Verity, of Covent-garden, and the chimney-pieces by Mr. Anstey, of Alpha-road. A spacious serving-room is situated on this floor, in close contiguity with the dining-room, and communicating by lifts with the kitchens at the top of the building. On the second floor, the smoking-room, 35 ft. by 31 ft., occupies the most important position. It is carried through two floors, and is provided with a gallery all round. It is lighted by two rows of windows on the north and east sides, and also by a large central skylight, starting with a cove, and provided with vertical and sloping lights, with a sun-burner in the centre. The walls are decorated with painted tiles, the spaces under the gallery and between the windows consisting of a series illustrating the Seven Ages of Man. The wall spaces on the gallery level are decorated with tile panels containing representations of flowers and birds. Adjoining the smoking-room is another dining-room, 31 ft. by 26 ft. It is called the Marble-room, as the walls are panelled, above the pitch-pine dado, with coloured Italian marbles. Above the marble

work are carved oak panels, illuminated with heraldic shields. This dining-room opens into a small private dining-room, 16 ft. by 12 ft. The kitchen and scullery are placed on the third floor. The floors of both are covered with chequered iron plates, screwed to the boards, with white-lead and felt joints, and turned up 2 in. all round next the wall, with overflow-pipe between the joists to take away any overflow of water. The larder is on the fourth floor. On the same floor as the kitchen is a large baker's oven, in two compartments, erected by Mr. Smith, of Lambeth. It weighs upwards of 40 tons, and considerable care had to be taken in the construction to carry securely so heavy a weight. Since the completion of the structure, a considerable addition has been made to the accommodation on the first-floor by the appropriation of a large area, originally intended for offices, as an extra dining-room, and to be used as a reception-room for guests when large evening dinners are served in the Queen's Room. The extra room thus provided is 50 ft. long and 17 ft. wide, lighted by a range of seven windows facing Mark-lane. It is called the Alabaster-room, as the walls all round, including dados and cornices, are lined with alabaster marble-work, consisting of a series of pilasters running nearly to the ceiling with moulded and sunk panels between. The exterior elevation consists of red bricks, with Portland and Bath stone dressings. The style of the architecture is Elizabethan, with details of a Classic type. The *Holborn Restaurant* was originally a large public bath, afterwards converted into a casino. It was subsequently started as a *restaurant* by an American, but did not succeed in his hands. About four years since it came into the hands of its present proprietor, who commissioned Messrs. Francis to alter and re-arrange the interior, and rebuild the part in Holborn. The grand *salon* is 95 ft. long and 50 ft. in width. The grill-room is 41 ft. by 37 ft. Very little architectural alteration was required. The large dining-room, called the Prince's Salon, was formed by sweeping away a number of smaller apartments. The kitchen and its accessories were necessarily placed in the basement. They occupy a position near the Lincoln's-inn entrance. The *Palmerston Restaurant* occupies the whole of the basement of Palmerston-buildings, extending from Old Broad-street to Bishopsgate-street. The premises were not originally intended for the purpose they now serve, but the *restaurant* has developed from a small beginning. There are entrances both in Old Broad-street and Bishopsgate-street, and a corridor, 12 ft. wide, leads from one street to the other. There is a spacious luncheon-bar at the Bishopsgate entrance, leading to an extensive range of sky-lighted apartments, in which there are eight billiard-tables. In the centre of the building is the French dining-room, adjoining which is the kitchen,—one of the best arranged in the metropolis, and not to be excelled for cleanliness and ventilation. Beyond this, and nearing Old Broad-street, is the chop and grill room, and on the opposite side of the corridors the smoking-room, leading again to the billiard-rooms. This again leads to the *bodega*, or wine-bar, through which Old Broad-street is reached. The reconstruction of the interior of the premises to adapt them to their present purpose necessitated some difficult needling-up of heavy walls and chimney-stacks more than 100 ft. high. The cellarage in the lower basement is very extensive, exceeding 12,000 ft. in area. In conclusion, Mr. Francis described the new Grand Hotel at Charing-cross, some particulars of which we published last week.* He said that in magnitude or elaboration of finish it could not compare with those gigantic American palaces to which he had already made reference; nor could it pretend to rival the Hôtel Continental at Paris,—a building probably unsurpassed for its grand central vestibule, its *table d'hôte*, its reception-rooms, *café restaurant*, and smoking-rooms, all decorated with a splendour and at a cost which would seem to an outsider seriously to peril the chances of its commercial success. Including the cost of the freehold, it is credibly stated that the total outlay on the building had been 700,000*l*. Of other buildings of this class, the fine Midland Hotel at St. Pancras Station was one of the most remarkable works of the present day. For excellence of design, and for minute attention to detail in every part and in all trades, Mr. Francis did not think it could be excelled. The construction of its grand staircase, with its ingenious groining, was especially to be noted as a most successful achievement. On a smaller scale, the Holborn Viaduct Hotel, by Mr. Isaacs, must be held to be a very meritorious work. Here, again, the principal staircase, with its broad flights, spacious landings, and honest iron construction, subordinated to decorative effects by simple coloured enrichments, was especially deserving of praise.

* See p. 136, *ante*. The number of shops to be provided is *thirteen*, and not sixteen, as there stated.

LAND AND LABOUR.

Sir,—There is one important fact, not yet stated, which appears to me to modify the conclusions at which you arrive in your articles on short time and the industrial crisis. That fact is, that it is impossible to find a market for any increased production; indeed, notwithstanding the enormously-curtailed production which now obtains, it is scarcely possible to sell what is now being made. Commercial travellers tell me that they have more trouble in selling 10*l*. worth of goods now than they had formerly with 10,000*l*. worth; and that even a George Moore would fail in getting a line.

The cotton spinners and manufacturers of Lancashire some time ago thought that by lowering wages they could force consumption, and they have after much opposition succeeded in reducing wages, but with the effect which was inevitable, that most of them are working short time, and many have closed altogether. They cannot sell what they produce. From the Board of Trade returns, I learn that the exports of all cotton goods during the month of December last was 5,065,449*l*., as compared with 5,523,341*l*. for December, 1877, a reduction of nearly half a million sterling, or 10 per cent. I do not suppose this is likely to go on for any great length of time, but I am decidedly of opinion, from my own knowledge of Lancashire, which is considerable, that with the mills and machinery they now possess, working continuously (and, as you have shown, most economically) three shifts per day of eight hours each, for six days a week, they could produce the whole of the cotton goods required in the whole world, and they could beat the world for cheapness in the doing of it. Of course, an Act of Parliament or two would have to be repealed to enable this to be done, and something like honesty of work would have to be maintained, which has not been the case of late years, and hence a preference on the part of some consumers for the manufactures of other countries, and an effort on their part to establish works of their own, as in India, where a considerable quantity is being made.

In the iron trade, again, we have a very much greater plant than can be continuously employed, except under such a return of prosperity as we had five years ago. I have no returns for the whole country, but in the Staffordshire district, where there are about 150 smelting-furnaces, less than fifty are in blast at the present time. Our total exports for last year of iron and steel rails amounted to 2,533,927*l*., as against 3,096,563*l*. in 1877. In this article alone, the United States, which six years ago took from us some 600,000 to 700,000 tons, last year took only 485 tons iron rails, and 500 tons steel rails, the difference being made up by rails of their own make.

As I have said before, the iron trade to America is as good as gone. But even there the capabilities of production are greatly in excess of the requirements. From a report just published by the secretary of the American Iron and Steel Association, we learn that at the close of 1878 there were in the United States 700 furnaces for the production of iron, of which only 260 were in blast, and 440 were idle, and yet they have 516,000 tons of pig-iron in stock, out of a production of 2,382,000 tons, an amount approaching our own total make. We can never hope, therefore, to have a resumption of our iron trade with America, and the same may be said of most other branches. They have years ago set themselves the task of becoming self-dependent, and they will, doubtless, in time succeed. But, as things now stand, we are very greatly dependent upon them for our food. In 1878, we took from them wheat to the value of 16,446,846*l*., as against 18,535,204*l*. in 1877, and 10,300,374*l*. in 1876, a constant and rapidly-increasing amount. Our manufactures for them are decreasing, and our imports of food are increasing, for which we shall have to pay in coin. And where is the money to come from if our people are idle? The disease of protection has broken out in Europe, and unless a drastic remedy is applied, which seems unlikely, our trade to Germany, at least in iron, will be shortly closed. The consideration of these facts leads me to the conclusion I have already stated,—that a re-arrangement of production must be made in Britain. The alternative is a wholesale emigration to new countries. For this, we have the advocacy of no less a personage than my Lord Derby, a nobleman for whom I have great respect. But will my Lord become the leader of such a movement, like William Penn or the Earl of Selkirk? I fear not. He loves his country too well to leave it, and if this be the case with a rich noble, why may it not be of the working men? Patriotism is not confined to any one class, and if the producers alone leave the country, what will become of the drones, of whom, I regret to say, we have a greater proportion than any other country, and when the emigrants reach their new homes, the greater part must, perforce, cultivate the land, whatever their former occupation; and why may they not do this at home, without a forced expatriation, when, as can be abundantly proved, the land is waiting for the workers? Nearly 78 millions of acres exist in Britain, and less than half that number of souls, all told, inhabit them. We have two acres to one person, and yet we are told the country is too crowded. The fact is that the operations of the laws affecting the possession of land, and the gravitation of the workers towards the industrial centres, have made crowded cities and deserted villages.

A few words in reply to "P. J.," who, while admitting his comparative ignorance of the subject, thinks I am guilty of a culpable temerity for advocating what he believes to be a delusion. That there is a vast area of cultivatable land in England left untilled I am positive, because I have seen it in the course of my travels through it, much on foot. That a great deal of that which is said to be tilled produces very much below its capabilities I heartily believe; and I have only to appeal to such men as Mr. Mechi for a confirmation. Our agricultural shows yearly attest the fact also. I might quote much in support, but will only cite a couple of experiences given by the late Mr. Wren Hoskyns, some time M.P. for Hereford, himself a landholder and owner. He says:—"I once gave a twelve years' lease to a hard-working labourer of about an acre of waste land, or what would have been land if it had not been an old gravel quarry, 'fit to starve a lark,' as the adjoining farmer (his employer) remarked, looking with a face of amusing amusement on the transaction,—'Long before the lease was out, the quarry had, with by-work only, become a rich-looking, almost level garden plot, the half of which, manured from his house and his pig, with some horn shavings (a favourite wheat drug of his—did you ever try it?), produced a measured crop of five-and-thirty bushels,—more than any acre in the parish could at that time grow!"

Again,—"I once had a snipe farm,—you have heard of turnip and barley, and wheat and bean farms,—I did not plant them, they rose spontaneously, not singly or in couples, but in clouds, and I used to fire accordingly, as boys do, at a covey of birds, and when the old retriever brought them in, all fluff and fibre, she used to look up a dismal apology in my face, as if she had done something wrong,—like a puppy who brings a feather to your feet, and gets a scolding, if you are out of sorts. There was one piece,—fourteen acres,—so far from the homestead, and with such a reputation, that I resolved myself into a committee of selection what to do with it. Melbourne's alternative, 'Couldn't we let it alone?' came, like the Tempter. Well, suddenly, it seemed on my pillow (they usually come in the dark) I got an idea. In eight-and-forty hours it had become a fact,—and more, eight-and-twenty facts in one; for I had marked out a road across the middle (the field was of oblong shape), and drawn up the rules, and taken the signatures, and given my own, and eight-and-twenty families (I can hardly say 'tenants,' in the individual sense, nor would you, if you had seen the place next year on a Sunday afternoon) had each got half an acre. I drained it for them, and then, giving them their rules, for they were theirs rather than mine, except one, and that was mine only at first, 'That no bad word should ever be uttered on "Coold Blaow"' (the patronymic of the allotment ground). I followed the Melbourne maxim

after all, I let it alone. They paid a pound each per annum,—monstrous, doubtless; but they did not seem to see it at all in that light.

My aim was only to 'remove whatever had hindered the individual from obtaining that degree of well-being which he was capable of reaching by exertions according to the best of his ability.' (Consul's Report, Prussia.) The first year's crops were very like—their neighbours'. But they were satisfied, which was more than I could say with my farm, though the rent charged on my debtor page was only half theirs. But the second year the whole scene was changed. As I walked, just before harvest time, up and down the allotment road (now a self-grown *chaussée* of eight-and-twenty stone contributors,—the rolling alone fell to me), I scarcely could trust my eyes. We talk of 'looking over our wheats'; I did not do that, because I could not,—at least, that was the impression on the eye, as I looked up along the even-serried floor of long, well-filled ears topping the firm, nodulated stems, like a veteran regiment in 'close order,'—closer could hardly be. There was one farm in the parish (not mine) that had crops as good,—at any rate, on a wider scale of goodness and quality,—but that was one of the really good farms of England,—the reputation-maker's. The rest, in racing phrase, were 'nowhere.' Considering how hardly money is scraped together in farming, I have often thought with what cheerful honesty the rents are usually paid. But the rents of labourers, with a bit of land, have in my experience been paid, sometimes under very adverse trial, with a touching sense of honour that has often recalled to me old Wordsworth,—

> 'I've heard of hearts unkind,—kind deeds
> With coldness still returning,—
> Alas! the *gratitude* of men
> Hath oftener left me mourning.'"

It is with some diffidence I ask you to print this long letter, but the subject is of such supreme importance that I am desirous of convincing such persons as "P. J.," whose "*non possumus*" I am confronted with so frequently. As to the remedy for these evils, I may say that it will not be of the simple nature suggested. Farms given up by one holder cannot be laid hold of and dealt with successfully without a change in the conditions of the holding. We must get rid of the "dead hand," and the "unborn hand," before we can do much towards emancipation of the land, which is a question for our coming statesmen. E. GRIMES.

Since writing the above, I have read your powerful article on this subject in the last number of the *Builder*, for which I beg leave to thank you.

AN APPEAL TO EMPLOYERS AND EMPLOYED.

How long is this fratricidal contention between the employers and the employed, these two important estates of the realm, to continue? Wisdom cries aloud, "For heaven's sake, be still! Have not both of you got eyes to see that commerce is in the throes of readjustment, and that England can never again, as easily as she did till within a few years past, monopolise the trade of the world? Nor is it right or just that she should. Other countries claim to share in industries and commercial enterprises. You made no secrets of your inventions, nor did you hesitate to manufacture and to sell your steam hands to the nations. How, then, can you be astonished that the work of your own hands should be turned against you to break down your commercial monopoly,—that other nations should compete with you in the marts of the world? America, France, Germany, Holland, and Belgium, are now extensive and still increasing factories. Bear this fact, this changed state of things, steadfastly in mind, and also the inevitable consequence,—viz., the alteration which must take place in the amount of goods manufactured in this country,—production must inevitably and gradually contract. Neither must it be forgotten that, whilst your staple industries are contracting, the population is increasing." These are the momentous conditions which have to be met and to be grappled with. For if the population of the country be increasing, whilst the demand for labour is decreasing, there is no power on earth to avert the cheapening of labour or of obviating the miseries attendant on a constantly increasing surplus population of unemployed. The struggle for existence is beginning to pinch. Women also assert their right to work and to compete in many industries with men: this increases the difficulty, and of course tends still further to cheapen labour by swelling the supply of hands out of all proportion to the demand.

How are these difficulties to be temporised with and staved off,—the chances of misery and calamity to be lessened? It is quite clear that, other things being equal,—coal, machinery, &c.,—that that country will be able to produce cheapest which shall be able to obtain the cheapest human labour. For the markets of the world will be held by the cheapest best. If we cannot continue to produce the cheapest best, then the evils contemplated must be hastened and aggravated by a more rapid contraction of our manufacturing industries, which must lead to the ultimate transfer of those industries to other peoples. The employers and the employed surely, therefore, cannot be so blind as not to perceive that, if the manufacturing trade of the world is to be retained by us for some time longer, on the score of self-preservation, that can only be by the diminution of the cost of production by every available means. Employers must forego in profits, and the employed in wage. This, or the gradual disappearance of manufacturing industry from these shores is the only alternative.

Yes! there may still be found some additional means which may aid us in staving off the evil day. Enterprise may push our commerce into yet unworked regions, but this can only be in respect to some of the rougher staples, and in these only till other nations shall follow in our wake. But this forcing of our manufactures upon other peoples can scarcely be justified otherwise than on the score of self-preservation. For it is a question which has yet to be considered whether the substitution of mechanical for human labour is a benefit to the world at large. It is undoubtedly to us as a nation, and in a purely selfish point of view; but that is insufficient to justify it, for it must deprive hands somewhere or other in other parts of the globe of industries. No! depend upon it, England will have to pass through a commercial storm of extreme severity, and she will only be able to escape its perils, and to pass triumphantly through it, by timely taking in sail. Employers and employed must make mutual concessions, and the State must consider some organised system of emigration for transferring the surplus population to the colonies.

The only possible means, be it remembered, for holding the markets of the world is to manufacture the cheapest and best, and employers and employed must unite in friendly council to effect this much-to-be-desired end.

METER.

"ART FOR ART."

MR. T. H. HALL CAINE lectured at the Free Library, Liverpool, on Tuesday, January 28th, on "The Poetry of Pre-Raffaellitism,—Dante Gabriel Rossetti." Mr. Councillor P. H. Rathbone occupied the chair, and there was a crowded and appreciative audience. After some general observations on the school of Rossetti's genius, Mr. Caine concluded with the following on art and morality:—

It would be wrong to say that Rossetti has part or lot with those false artists, or no-artists, who assert, without fear or shame, that the manner of doing a thing should be abrogated or superseded by the moral purpose of its being done. Through and in his poetry, as in his painting, we may see that to him, as an artist, the first thing is to do his work supremely well for its own sake, while the accident is the ethical result which follows. Rossetti makes no conscious compromise with the puritan principle of doing good, and to demand first of his poetry the lesson or message it has for us would be wilfully to miss of pleasure while we vainly strove for profit. He is too true an artist to follow art into its byways of moral significance, and thereby cripple its broader aims. But at the same time, all this absorption of the artist in his art lives and works together with the personal instincts of *the man*. It is everywhere mixed with it and coloured by it, and to do good on other grounds is in Rossetti's art involved and included in being good on its own. And those who assert that the manner of doing a work is *the essence* of the work done, may claim to be the perfect artists by right of their passion of pursuit. They are assuredly imperfect men. Their work may be of supreme value to certain byways of art, but their narrowed aims make as feeble an effort as puritanism ever advanced to cover the whole domain of art. The colour of the picture, and the music of the poem belong to the manner of the artist, and appeal first to our affections, but the pleasure or even exaltation of soul we derive from them is due, not to any virtue in themselves so much as to their own spiritual significance and suggestiveness.

But the manner of doing a thing can never be more than a part of the work done, and art has never been followed for its own sake without involving other meanings, purposes, and results. Look broadly at the Mediæval ages for evidence of this enforced marriage of manner and meaning; or look specially, if you will, at the age of the Renaissance. The artist has never at any time divorced his moral nature from his artistic instinct, and cannot. The ethical significance may have been always the accident of his *work*, but it has been always the essence of his nature; and those artists who, to-day, claim the supreme place for the manner of their work are struggling either to cheapen the gifts they have not got in abundance, or, more probably, to conceal the quality of the meaning in their work, of which they have no moral cause to be proud.

You may know a tree by its fruits, but the fruits are not the essence of the tree, and even as an artist's moral instincts are so will his art be. His art cannot escape the colouring it gets from the human side of his nature, because it is in the essence of art that it appeals to its own highest faculties largely through the channel of moral instincts:—that music is exquisite and colour splendid, first because both have spiritual significance, and next because they respond to sensuous passion. But it is one thing to pursue art (for its own sake) with an over-ruling moral instinct that gravitates towards conduct, and quite another thing deliberately to absorb art in moral purposes. Cowper and Klopstock furnish well-worn examples of the trespass of unlovely morality upon the truth and beauty of art; and Edgar Allen Poe and Chas. Beaudelain of the violent abrogation of puritanism in the pursuit of manner. But the poetry of Rossetti shows how possible it is, without making conscious compromise with the puritan principle of doing good, to be unconsciously making for moral ends. This is because the basis of the poet's nature is a Hebraic craving for the correct, and as the tree is so have the fruits been. There is a passive puritanism in "Jenny" which lives and works together with the artist's purely artistic passion for doing his work supremely well. Every thought in "Dante at Verona" and "The Last Confession" is mixed with and coloured by a personal moral instinct that is safe and right. And now, looking at the relation of art and morality as seen in the light of Rossetti's poetry, there will be no need for "the poor fine arts to take themselves away" from before the face of aggressive puritanism if artists will look closely to it that the personal nature which, without purpose of their own, permeates their work is such as will bear fruits of good meaning. After that, art for art by all means, both first and last, and art will assuredly be good on other grounds as well as good on her own.

We cannot easily bring ourselves to believe that either moral or artistic self-consciousness can inspire true art-work, or even so much as nestle at the root of it. We know that men have consciously wrought great work for the praise of achievement, and for the expression of religious feeling; but we cling to the belief that the noblest and best has been done when the artist has forgotten his purpose and yielded himself up with abandon to his mood. The sonnets of Rossetti's "House of Life," seem to our enchanted sense to have grown up out of sheer joy of their own loveliness. Nevertheless, all art is essentially self-conscious, and between two such opposite aims and forces as operate in the art of Cowper and in the art of Rossetti, we see only certain differences of kind and measure of self-consciousness. The inspiration is dead when the picture is painted and the poem written. It is the key of the poet's art to prolong the inspiration, or reproduce it by memory. The "mute inglorious Milton" and the Milton of imperishable speech differ only in this: to the one the angels, whose visitations both enjoy, comes like soft music heard in sleep, and leaves after it an unsatisfied yearning and sweet sadness; to the other it is an angel to be wrestled with the whole night long, if perchance with the dawn it leaves its name and blessing behind it. And the most peerless thing of beauty in Rossetti's volume is to the inspiration which

induced it, like Rossetti's "Portrait," to the lady it represented,—

"Less than her shadow on the grass,
Or than her image in the stream."

In moving the usual vote of thanks to the lecturer, Mr. P. H. Rathbone, from the chair, said the audience ought not to be led astray by the enthusiasm they had seen, but should be put on their guard as to the true nature of the work of Rossetti. This remark occasioned the utmost curiosity amongst the audience, and when Mr. Rathbone proceeded to say that Rossetti was the greatest painter and poet of animal life, and that neither his paintings nor his poems gave evidence of acquaintance with anything but the purely fleshly side of human life, the consternation felt both by audience and lecturer was very marked. The poet had learned woman's heart, as Mr. Caine observed, but everywhere in those sonnets which they had heard so much extolled was to be seen the sensual side of Rossetti's nature. Rossetti painted women without soul, and depicted the love of man for women, not man for man. These opinions, so much out of harmony with the lecture, created the liveliest interest, and when Mr. Caine rose to reply to the vote of thanks, book in hand, the audience manifested their enjoyment of the inevitable encounter. He, with much warmth, retorted upon Mr. Rathbone that Dante Rossetti had never painted a "Laus Veneris"; said his passion for woman was not of the nature of Swinburne's, but a Keatsean crystallised passion; and read the sonnet, "On the Refusal of aid between Nations," to refute Mr. Rathbone's charge that Rossetti cared nothing for anybody but his egotistical self. The warmth of the reply appeared to be relished by the audience, who were clearly unaccustomed to such a collision between chairman and lecturer, and the cheers and counter-cheers which followed the points of each speaker showed how eagerly they were taking sides. It is not often that a purely educational platform is treated to incidents like these, and, perhaps, all things considered, it will be well for all parties concerned if in future a recurrence of such a clashing of opinion is avoided.

THE TEMPLE OF JERUSALEM.

Sir,—As Mr. Fergusson thinks it becoming to apply such terms as "absurd," "manifestly absurd," "unfair," and "misleading" to the arguments of an officer who has always treated him with the respect due to his position, allow one word from a surveyor who has given much study to the question of the site of the Temple.

Twelve years ago I had no further acquaintance with the topography of Jerusalem than such as might be gathered from your own columns; as, for example, from the *Builder* of December 7, 1867, in the article on "The Ninth Crusade." I knew that the question was rather angrily debated, but I had no view of my own, except that it must certainly be determinable by patient research.

Since that time I have read and studied all that I could lay hands on on the subject, including, of course, the great survey of the Temple area, and the rock levels of the whole city of Jerusalem, which it is evident to a surveyor must form the basis of any sound inquiry.

What seemed to me to be conclusive as to the site of Solomon's temple was the exact accord of the three ancient authorities, the Bible, the Talmud, and the works of Josephus, in the statement that the Temple was on the crest of a hill. Unless these authorities are thrown altogether overboard, these statements control the whole question, and any other arguments must be subordinated to this condition.

Josephus says (Bell. v. v. 1),—Το δὲ ἱερὸν ἵδρυτο μὲν, ὥσπερ ἦην, ἐπὶ λόφου καρτεροῦ, and adds that "at first τὸ ἀνωτάτω χθαλαμὸν was hardly sufficient for the temple and the altar, for all around was precipitous and declining." In the course of time, he goes on to say, the hill was raised around the holy house, and surrounded by a wall. Nothing can be more definite than this statement made by a priest, to whom the whole area of the temple and its courts was familiar, and who was the historian of the spot. He also says that the *peribolus*, or outer wall, rose from the deepest parts of the φάραγξ to 300 cubits, or even more, and that it contained stones of 40 cubits. These remarks are quite intelligible as applying to the prodigious height of the south-east corner of the Haram wall, rising from the Kedron Ravine, on the lower courses of which the old Phœnician letters occur.

The treatise Parah of the Talmud, iii. 6, describes the bridge which was erected, pier over arch, and arch over pier, from the mountain of the Temple to the Mount of Olives, on the occasion of the Sacrifice of the Red Heifer. The tract Middoth, II. 4, says that the eastern walls of the Temple were low, in order that the priest who performed this sacrifice, standing בראש הר המשחה, on the summit of the Mount of Olives, might dispose himself right, מתכוון, and look in through the gate of the holy house while he sprinkled the blood. According to the Survey, the summit of the Mount of Olives is exactly opposite to the Sakhrah rock, on the summit of the Temple Hill, so that a line of vision runs directly through the gates into the Holy House, if there situated. If the Temple had been on the south-west slope of the hill no such arrangement would have been possible.

3. The book of Genesis, xxii. 4, says that Abraham lifted up his eyes, and saw the place where he was to build an altar "afar off." את המקום מרחק. Now, although it is as yet undecided whether the spot indicated in the book of Genesis was on this Temple mountain, or, as contended by the Samaritans, on Mount Gerizim, it is certain that the Jews could not have applied the expression to the south-western slope of the hill, or to any spot but its summit, in accordance with the two former determinations.

It seems to me, as a practical surveyor, that these three authorities are so conclusive as to the localisation of the site of the Temple and altar of Solomon on the natural rock summit of the hill opposite the Mount of Olives, that there is no room for discussing any theory that should place it on the south-west slope, without despising the only ancient authorities on the subject.

A Civil Engineer accustomed to Trigonometrical Survey.

ST. ALBAN'S CATHEDRAL.

Sir,—I have read Mr. Evans's letter with much interest. He has the advantage of many among us in knowing more than we do of the documentary evidence as to the works carried on at St. Alban's in the fourteenth century. If his theory were correct, that the existing roof of the nave dates from the middle of the fourteenth century, many small difficulties would no doubt be explained in the easiest and simplest way possible; and I am inclined to hope that the much later date which I gave it may, on further examination, be found to be incorrect. But until I can make such further examination, both of the nave and of the other roofs referred to by Mr. Evans, I am bound to say that I find it difficult to accept his solution.

Now that the proposed new roof has been conclusively shown to be entirely a new invention, and in no sense a restoration of anything that ever before existed, with parapets, at St. Alban's, the only defence of the course which is to be taken, which still remains unassailed, is the statement that it was what Sir Gilbert Scott had himself intended to do. Nobody has yet given us the authority for this statement. Mr. J. O. Scott told the Conservation Committee of the Institute of Architects that, curiously enough, his father had never mentioned the subject to him, and he could, therefore, only conjecture what he might have done. It so happens that, in looking over some old letters the other day, I came on one of Sir Gilbert's, dated October 24, 1867, which answers with singular exactness for the course which he would have advised. He was writing to me about some works which had been executed in a Scotch cathedral to which he had been consulting architect, and these are his words:—"I found that ——— had reported that the old roof must be taken off, and I at once expressed my consternation at such an idea, and took it for granted that he would follow my advice; instead of which he got sanction for carrying out his own views, set to work, and before I heard more he had it nearly all off. I then, finding that he might quite well have saved it, withdrew in disgust. It was a roof of Scotch fir of the same age with the ceiling, and made expressly for its support." He concluded his letter, knowing that I was on the point of going into Scotland, with these words,—"I wish you would do anything you can to call attention to anything which is being done wrong."

It would be difficult to find any words more applicable than these of Sir Gilbert Scott's, not only to the destructive scheme proposed at St. Alban's, but also to the course which I and other architects have taken in "calling attention" to it.

George Edmund Street.

Sir,—The *Builder* has placed us all under immeasurable obligation by the course it has taken in the matter of the roof of St. Alban's Abbey (may I here plead for the retention of the familiar old name "Abbey"?).

If the proposal to erect a high-pitched roof had been carried without protest, then, indeed, would the whole architectural profession have earned, and well merited, the severest blame. Condemning a fairly sound roof as "ruinous" and "rotten," ignoring the actual markings of the old roof on the western face of the tower, and imagining a non-existent roof-line,—all these have a very bad sound indeed.

The Faculty Committee seem to have been driven by a kind of fate into antagonism with all our leading architects, and are now apparently prepared to meet all opposition to their proposed proceedings by masterly immobility.

I do think we are entitled to some facts with reference to the proposed roof-line, which no one that I can hear of has yet been able to find on the tower.

As an outsider, I would ask to be allowed to protest against the somewhat contemptuous style in which Mr. J. O. Scott has thought fit to speak of Mr. Neale's labours; for it is such labours as his, with earnestness and thoroughness as their characteristics, carried out, moreover, with a zeal and an enthusiasm bordering on self-denial, that can alone save the profession of architecture from becoming, in this country, what, according to some, it has already become, a lifeless, copying trade. Mr. Neale is deserving of our most hearty thanks, for when his admirable drawings were published in the *Builder*, the controversy began for us who had not actually explored the roof of St. Alban's Abbey.

A Layman.

Sir,—You must forgive me if I dare to ask you to print so astounding an assertion as that I am absolutely amused with the archæological odium engendered by the controversy on St. Alban's Abbey roof. Though "damns," even in *Bob Acres's* time, were deemed old-fashioned, they live again in our own later day of resuscitation and revival. One man, who evidently believes in "conservative restoration," whatever that may be; in the "credit of the whole profession of architects," which, I may add, is seriously impaired when one member attempts to oust another from an important post; and in "honest acquiescence," seems determined not to let others scrape an intimacy with the walls to which he claims a unique and student-like right. Another man does "not wish to enter into the controversy," and then writes a column and a half of the *Builder* about it. A third wants to know why the Institute of Architects* does not "do something," just as the Liberals used to taunt the Conservative party, which, once in power, generally shows itself too active. Then another gentleman, forgetting the advice to "shun Carlylese," writes quotations with a fine Saxon emphasis, as if readers of newspapers were not sufficiently perplexed already. Most of the combatants seem to sign themselves fellows of the Society of Amateurs, as Sir Edmund has styled the "Antiquaries," a society always youthfully hot and artistically indignant.

Dear, dear sir, in the fear of bores, and for the love of good words,—not to mention good language,—let there be an end of the pitch-pine-rafter-and-flat-oak-ceiling fight, and thus oblige

An Old Friend.

The Royal Institution.—At the last general monthly meeting on the 3rd inst., Mr. Warren de la Rue, F.R.S., was elected secretary of the Royal Institution, and Mr. William Spottiswoode, Pres. R.S., was elected manager. The Royal Institution must feel proud.

* In justice to the Royal Institute of Architects it should be repeated that the council passed, some time ago, an important resolution with reference to St. Alban's Cathedral roof, which was noticed in the *Times* and in our own columns. The wording of it was:—

"That the council of the Royal Institute of British Architects, having learnt from John Oldrid Scott, Fellow, that he is satisfied there is no difficulty whatever in repairing the oak roof now existing over the nave of St. Alban's Cathedral, express their opinion that in that case it would be most desirable to abandon the proposal to erect a new roof over the same."—Passed 16th December, 1878.

ANCIENT ART AND THE ANCIENT GEOMETRY.

WE are informed that the paper on "The connexion between Ancient Art and the Ancient Geometry, as illustrated by the Works of the Age of Pericles," to be read by Mr. Pennethorne (elder brother of the late Sir James Pennethorne, and the author of a recent important work on the "Geometry and Optics of Ancient Architecture"), at the next meeting of the Royal Institute of British Architects, will be explained by original drawings made expressly for the lecture by Mr. John Robinson. The sketches made by Mr. Pennethorne many years ago in Egypt and in Greece will also be exhibited. The paper traces the origin of Greek art from the early Egyptian monuments, and likewise endeavours to show the possibility of recovering from the marble remains in the Acropolis of Athens, the ancient theory of proportion, and the methods that were employed by the Athenian architects for correcting these first-given proportions, so that the temples when erected should present to the spectator the same relation of the parts to each other as that in which they were originally designed. Mr. Pennethorne has also a suggested theory referring to the curvature of the horizontal lines in the Greek Temples, together with the geometrical methods of designing the Greek mouldings and ornaments.

It seems to us that the reading of this paper, which is to take place on Monday next, 10th of February, is most opportune,—more especially because in M. Lesueur's book just published it is laid down that the curved horizontal lines known to exist in the steps and cornices of the Parthenon are due to the effect of settlement. Such a statement from a member of the Institute of France, and a gentleman who, perhaps, among the many celebrated French architects has been longest before the public, cannot be allowed to remain unanswered.

THE BATTERSEA AND CHELSEA OLD BRIDGE.

PROPOSED NEW BRIDGE.

THE impending opening to the public, free, of Battersea old bridge, along with the rest of the Thames Bridges, has led to a proposal for the construction of an entirely new bridge between the two sides of the river. The proposal has originated with the Chelsea vestry, who are seeking the co-operation of the Battersea vestry. The Chelsea local authorities urge that, on the old Battersea Bridge being opened free to the public, and being placed under the control of the Metropolitan Board of Works, the Board will be under the necessity of expending a large sum of money upon it in consequence of its present decayed condition, or of erecting an entirely new bridge on the site; and it is urged that, in the event of the erection of a new bridge being decided upon, it should be built higher up the river from a point at the western end of Cheyne-walk, formerly known as Cremorne-road, Chelsea, and, crossing the river, should terminate at a point to the eastward of Battersea Church, from which an approach should be made to Battersea High-street. It is contended that a new bridge erected between these points would be a great public accommodation alike to the western parts of Kensington and Chelsea, and also to the western parts of Wandsworth and Clapham Junction district, all of which neighbourhoods are enormously increasing in population.

Engineers' Spelling.—At the recent meeting of the Cyrstal Palace School of Engineering, Mr. Harrison Hayter, C.E., who presided, said that the examiners of the school had combined with their praise of the students' work a little judicial comment upon their spelling. It was pointed out, for example, that "knoch" was hardly a fair orthographic symbol for "notch." On the other hand, the lad who spelt "hydraulic" thus,—"hydrolick,"—was a little too fond of phonetic spelling. Mr. Hayter, however, reminded the examiners that education in these minute details has only recently been expected of engineers. In his younger days many clever engineers were comparatively unlettered. He knew one particularly able fellow, the admiration of his profession, who puzzled all his comrades by the use after his name of the two letters "S.I." At length some one was bold enough to ask what they meant. What was the answer? "Civil Engineer."

SOCIETY OF ENGINEERS.

THE first ordinary meeting of this society for the present year was held on the 3rd inst. The President, Mr. R. P. Spice, presented premiums of books for papers read during the past year, viz.:—To Mr. Henry S. Copland, for his paper on "Modern Roadway Construction," and to Mr. George G. André, for his paper on the "Application of Electricity to the Ignition of Blasting Charges." The President then proceeded to deliver his inaugural address. Glancing in passing at the causes and results of the present general commercial depression, Mr. Spice specially referred to the circumstance that some of the markets of the world,—formerly open to our merchants and manufacturers,—have been virtually closed to us by the lamentable return to the old system of so-called "protective duties," the application of which to our manufactures amounts to the positive prevention of the people from continuing to be our customers, their statesmen,—blind to the best and lasting interests of the masses,—having determined so to favour the few at the expense of the many, in utter disregard of the soundest principles of political economy. Mr. Spice then gave an exhaustive *resumé* of the progress of electric lighting during the past year, the advances made in which, he observed, had been very marked. He described the various systems of electric lighting which were now before the public in a practical form, and pointed out the extent of their application in England. The Jablochkoff light had been experimentally tried on the Holborn Viaduct, in Billingsgate Market, and was now under trial on the Thames Embankment. It had also been tried at Westgate-on-Sea for twenty-four nights, and its cost carefully ascertained. For fuel, Jablochkoff candles, and attendance for the six lamps used, the cost was 40*l.* 9*s.* 4*d.* The cost of gas at Westgate prices (6*s.* 6*d.* per 1,000 cubic feet) to produce the same amount of illumination would be 16*l.* 15*s.* 4*d.*, whilst at London prices (3*s.* 6*d.* per 1,000 feet) it would only be 7*l.* 18*s.* 9*d.* The Rapieff, the Serrin, the Siemens, the Lontin, the Wallace, the Werdermann, the Van der Weyde, and the Wilde electric light systems were successively described, and the adoption of the Rapieff light at the *Times* Office, and of the Wallace light at the Great Eastern Railway Station in Liverpool-street noticed. In summing up the merits and demerits of the electric system, the President observed that there could be no doubt but that, for special purposes, where a high standard of illumination was a *sine qud non*, and where the extra expense it entailed was of no moment, that light would find a wide field for its adoption.

ART COPYRIGHT.

A MEETING of artists and others interested in this subject was held at the Grosvenor Gallery, Bond-street, on the 1st inst.

Sir Coutts Lindsay, who occupied the chair, said he had called the meeting in consequence of having received numerous letters from artists suggesting the propriety of some expression of feeling on their part before effect was given to the recommendations of the recent Royal Commission. He understood that the Government intended immediate legislation on the subject. At present the law was very anomalous, and its effect was to give neither the purchaser nor the producer of a picture any claim to the copyright except by special contract and in the case of works done on commission. That such a state of things should exist seemed to him to be unworthy of the legislation of England, and it was high time some more complete form of laws should be promulgated. He found among the Commissioners,—first, the president, who represented the Government; several lawyers; two literary men, Mr. Froude and Mr. Trollope; a scientific gentleman; a musician, Sir J. Benedict; but there was not a man having any interest in art. No representative of the interests of art was nominated on the Commission,—a most unfortunate circumstance, and one which, probably, had affected the resolutions of the Commission very injuriously in the interests of art. The laws respecting painting, drawing, photographs, and sculpture had been framed at different times, and, therefore, there was little or no uniformity in them. There was great disparity in regard to copyright in them, both as to the time they enjoyed protection and also in other divisions of the matter. Hitherto artists had enjoyed copyright during life and seven years after death. With regard to sculpture, it had been fourteen years after production and fourteen years after if the sculptor was then alive. By the present law, if an artist sold a picture without having the copyright reserved to him, he lost possession of it, while the right did not vest in the purchaser unless there was a written agreement to that effect. The copyright became the property of anybody who wished to make use of the idea which ought to belong to the artist. If a painting or art-work was done on commission, then the right belonged to the commission, and ceased to be the property of the artist. There was no doubt that fresh legislation was needed on that point. Such an anomaly had never before existed in English law, and he thought he expressed the feeling of the meeting in saying that artists were grateful to the Government for proposing to legislate on the subject.

Mr. Field having recounted the history of artistic copyright legislation from Hogarth's time to the present day, and remarked that painters only asked that they should not be placed in a worse position than a mechanic with a box of chemicals,

Mr. Richmond moved:—

"That, while welcoming the report of the Royal Commission as exposing the grave defects of the existing law of artistic copyright, and recognising the value of many of its recommendations, this meeting is nevertheless of opinion that, in regard to its main provisions, the interests of the public could be as adequately secured by means less injurious to the interests of art."

Mr. Albert Moore seconded the proposition and it was carried unanimously.

Mr. A. D. Fripp, seconded by Mr. Keeley Halsewell, moved a resolution to the effect that, except in the case of portraits and *replicas*, the right of reproduction should remain with the painter, unless he specifically parted with it.

Mr. A. Lucas, seconded by Mr. Sadler, moved an amendment in favour of the recommendation of the Commission.

The amendment was lost; the original resolution was then carried all but unanimously.

Mr. Herkomer proposed the third resolution:

"That while admitting the value of registration as applied to forms of art like photography and engraving, which are susceptible of exact and perfect mechanical reproduction, we are nevertheless of opinion that it would prove a vexatious and ineffective mode of protection for the design in works of imaginative art, of which the value depends upon the handiwork of the artist himself in the expression or embodiment of such design, and which are, therefore, incapable of precise verification by means of description or copy."

Mr. John Leighton seconded the resolution, which was carried, there being only one dissentient.

Messrs. Fripp, Richmond, A. Moore, and Herkomer were nominated as a deputation to bring the resolutions of the meeting to the notice of the Government, and the proceedings ended with a vote of thanks to the chairman.

ILLICIT COMMISSIONS.

THE Derby master-painters, fancying themselves aggrieved because the painting of the Free Library and Museum was, on the recommendation of the architect, Mr. Freeman, of Bolton, given to a Manchester firm, have met and passed a resolution disapproving of the conduct of the Free Library Committee in letting the job go out of the town. But our present purpose is not so much to refer to this alleged grievance as to call attention to a statement made by the *Derby and Derbyshire Gazette* of the 24th ult., in which paper, under the head of "Local Gossip," some comments were made on the meeting. We extract the following passages:—

"The committee were greatly to blame if they left themselves in the matter in the hands of their architect. We do not for a moment insinuate that Mr. Freeman has done or would do anything unprofessional or dishonourable. *But we happen to have had a little experience in building, and that experience has taught us that it is not unprofessional or dishonourable for architects to receive a commission upon orders that come through them for decorating and furnishing the edifices which they erect.* Supposing that Mr. Freeman is above such a practice, he would yet naturally be predisposed to favour tradesmen in his own locality, or known to him from previous transactions."

Judging from the sentence which we have italicised, the writer must have been singularly unfortunate in his "little experience"; and he seems to be utterly unaware of the fact that any member of the Royal Institute of British

Architects (a body which is admittedly at the head of the architectural profession) who can be proved guilty of receiving such illicit commissions is liable to instant expulsion from its ranks. This shows that the Institute's idea of "unprofessional" or "dishonourable" conduct does not exactly agree with that of the writer in the *Derby Gazette*.

THE DWELLING-HOUSE.

The second course of Cantor lectures (Society of Arts) will be by Dr. W. H. Corfield, M.A., on "Dwelling-houses: their Sanitary Construction and Arrangements." It will consist of six lectures, to be given on the following dates:—

Feb. 17.—*Situation and Structure of House.*—Drainage of soil, foundations, walls, roof, rain-water pipes, &c.

Feb. 24.—*Ventilation, Warming, and Lighting.*—Size of rooms, overcrowding, ventilators, stoves, lights, &c.

March 3.—*Water Supply.*—Sources, systems of service, cisterns, pipes, filters, &c.

March 10.—*Removal of Refuse Matters.*—Dust, kitchen refuse, earth closets, &c. Conservancy and water-carriage systems compared.

March 17.—*Sewerage.*—Main sewers and house branches, traps, ventilation, &c.

March 24.—*Water-closets, Sinks, and Baths.*—Arrangements of pipes, traps, &c.

The course will be illustrated by specimens and models from the Parkes Museum of Hygiene.

LONDON SHOW ROOMS.

Messrs. John Hardman & Co. have recently rebuilt their London premises at 13, King William-street, Charing-cross, where they have been established since 1851. The new show-rooms and packing-rooms occupy the whole of the lower part of the building. The principal room is 24 ft. high, so that it is well adapted for the display of large coronæ, &c., which can be suspended at a good height, and by means of a special arrangement of pipes and connexions gas-fittings can be temporarily lighted up for inspection when required. The lighting of the rooms is by ventilating globe pendants, which Messrs. Hardman have specially made for the purpose,—some in brass, and others in brass and wrought-iron, all the ventilating-pipes being of copper, which will become in time of a rich brown colour. The products of the burnt gas being led away by these pipes, and an equable temperature maintained throughout the premises by a heating apparatus in the basement, any considerable injury to highly-finished metal work will be avoided. All small articles are shown in wainscot dust-proof cases, some of them being iron plated, and connected with electric alarums by Messrs. Comyn, Ching, & Co. Stained glass will fill the lantern lights, and wall decoration of different types will be introduced in panels prepared for the purpose; showing thus specimens of other arts now practised by Messrs. Hardman for a good number of years,—glass painting, for instance, since 1848. All the metal fittings have been specially designed. The woodwork is all in pitch-pine and wainscot. Mr. J. Stannah has fitted up powerful hand-lifts, by which large cases can be carried from the street to the packing-rooms, and articles for exhibition lifted to and from the basement and show-rooms. Messrs. Lott & Son, of Fulham-road, were the builders, who carried out the work under Messrs. J. & S. Flint Clarkson, architects, Great Ormond-street.

FROST AND WATER PIPES.

Sir,—Water in freezing expands with enormous force. If a tap be turned during the freezing up a puff of air will result, showing that the air in the pipe is becoming compressed.

What I have found to be a simple remedy is, to leave a tap or taps at the lowest point of drawing off, dribbling say 120 drops a minute, and although the pipes may ultimately freeze up they will not burst, as the ice then expands along the length of the pipe instead of across it.

It is best, of course, to empty the pipes, and a stop-cock next the cistern on the down pipe, or a service-box in the cistern, with a spindle valve, and line and ring into the water-closet below it, will keep the cistern full, when the taps can all be turned on and left so during the night. Care, however, should be taken not to leave the water-closet traps unsealed. T. G.

DRAINAGE PLANS.

Featherstone (Yorkshire).—On the 29th ult. an inquiry was held by Mr. John Thornhill Harrison, C.E., with reference to the application of the Featherstone Local Board of Health for sanction to borrow 7,000*l.* for the execution of sewerage works for three of the townships within their district. Considerable opposition was raised, but the objections were overruled by the inspector, who said he should report favourably on the scheme to the Local Government Board. The plans were prepared by Mr. A. W. Cross, Stud. Inst. C.E., the local surveyor, acting in conjunction with Messrs. Hodson, Price, & Hodson, of Loughborough.

LAMPS FOR THE ELECTRIC LIGHT.

Sir,—An inspection of the electric light on the Thames Embankment has suggested the following ideas to me, which I should be glad to submit to those who are practically interested in the subject, and able, if necessary, to test them by experiment.

With opal or ground glass globes of the density found necessary to soften the intensity of the light, it appears to me that the latter mainly radiates, not directly from the electric arc, but from the intensely illuminated globe which encloses it. Under these circumstances, would not the use of *much larger globes*, by which the area of the radiating surface would be increased, augment the percentage of light utilised, at the same time distributing it in a more soft and diffused form? These large globes might also be of somewhat less density than those now employed, as the rays would not reach them in so concentrated a form. W. B.

GLASS AND IRON.

Sir,—Will any of your readers inform me whether, by contraction or expansion, glass will start with two stars in the centre?

I have had an extraordinary case occur to me in this way. I have inserted a light in a verandah; the framework was made of T-iron, glazed with 26-oz. ground bent glass. About two months after completion one square started with a star in the centre. I had it taken out, but did not find it bound in the least in the frame. That square was replaced with a smaller one.

Since then some nine months have elapsed, and now another pane has gone, in a similar way, with two stars. As I have always found glass, broken by contraction or expansion, to start at the side and go right across the pane, I appeal to your readers, hoping they will be able to give me some of their experience.

An Inquiring Tradesman.

P.S.—I would add that the size of the panes is 58 in. by 22 in.

ENGLISH AND FOREIGN CARVERS.

Sir,—In your impression of the 18th ult. (page 80) you publish a letter from Mr. Hems upon the labour question, to which I should have replied before had I not come to the conclusion that the letter was scarcely worthy of notice. You have, however, published a reply (p. 108) from another correspondent, which has again brought the matter before my mind. If not too late, may I be permitted to say a word upon the subject? Mr. Hems seems to lack experience when he says a man charges 1*s.* per day and travelling expenses in order to swell up his "time-paper." My experience for the last thirty years has been that no competent man, except under pressure of distress, would accept country work without the usual 1*s.* per day extra and all travelling expenses paid; and there is no reason why he should, as there are a great many additional expenses incurred by a man being from home; and no reasonable employer would object to it. If Mr. Hems has paid 1*s.* 6*d.* per hour to an incompetent man who "does his beer," he has only done what employers are often doing till they prove their man; but they "sack" the man, and do not write to the *Builder*. With regard to his clever little Prussian who "does not beer," and who does not "swell up his time-paper" with extras, he, no doubt, has been gratified by the eulogium passed upon him (that is, if he understands English); but with all due respect for the foreigner, I can testify to finding as honest Englishmen. Extras for country work are not extortionate, but an established and just rule. Both foreign and English assistants can be obtained at all prices, both as mechanics and art-workmen, but it is paying the qualified foreign art-workman an ill compliment to say that he will work for less money than any English mechanic. Jno. Lewis Jaquet.

RED LEAD AND WHITE ZINC.

Sir,—I read in your issue of January 18th an important article on the bad effects of red lead upon the men who clear it from iron ships, and on the necessity of finding a substitute for it. I believe this is an old grievance, and cannot but express surprise that the red lead has not long since been superseded by some harmless and more effective substance.

At the last meeting of the British Association I made known the composition and properties of a new mineral white invented by Mr. Thomas Griffiths, of Liverpool, which would be, both as regards efficiency and cost, a very great improvement upon the dangerous red lead still used so extensively. This new white, an oxy-sulphide of zinc, is, in my opinion, one of the most ingenious and useful discoveries of modern times, and sooner or later it must supersede both red lead and white lead in all their applications as pigments or protective surfaces. It was exhibited at the Paris Exhibition (where it received a medal) and at the recent Sanitary Conference at Stafford, under the name of "Griffiths's Patent White," and noticed in the *Builder* of August 3rd, 1878. I believe also that Mr. Griffiths is in possession of some results of experiments of more than ordinary importance upon the protection of iron surfaces by means of this new pigment, which can be transformed at will into a kind of enamel of great beauty and permanence; and it would certainly be a matter of great public utility if that gentleman would consent to make them known. T. L. Phipson, Ph.D.

THE STATE OF TRADE.

Sir,—I have been looking into your columns each week for some time past, expecting some action to be taken or proposed by members of the building trades of London, seeing it is a question of much importance in the present depressed state of trade, and which just now is receiving great attention in almost every provincial town in the kingdom. And why should not the question of a reduction of wages or longer hours of labour be considered here, when we look at the thousands out of work, and find our neighbours over the other side supplanting us in nearly every article of manufactured joinery? Look at the vast number of doors, windows, &c., imported, in some cases so low in price as to be nearly equal to what one has to pay a joiner here for labour. Are we to stand by and watch these things, taking no notice whatever? For my own part, I think not only builders but workmen engaged in the trade should themselves look at it in a sensible light, and say what shall be done. I maintain that all classes of the building trade, both joiners, masons, bricklayers, and labourers, are in a worse position than they were ten years ago, financially I mean, for what is the use of a few extra shillings per week if it has all, and more, to be paid in extra rents and cost of living? I think we should one and all, masters and men, look into matters, and help one another, the masters by meeting the men fairly in an adjustment of wages, and the men by agreeing to the old standard of fifty-six and a half hours per week, or giving and taking,—for it is quite certain the shorter hours have not increased our trade. Unions and strikes I abhor. I am a working man myself, and honestly believe the above is one of the many causes from which we are now suffering. I trust some abler pen than mine will take the matter up. A Journeyman Joiner.

A New Company, called the Birmingham House Building, Land, and Investment Company (Limited), has been registered, with a capital of 50,000*l.*, in 20*l.* shares. The object of the company is to acquire eligible land for building purposes, and the erection thereon of good substantial houses that will constitute a sound investment.

WELSH PAVING.

SIR,—Having lately made a visit of inspection to the Penmaenmawr quarries, I cannot let the objections of Mr. Allison (borough surveyor of Bradford) to them as a paving-sett producing centre pass unnoticed.

Our experience in this town is similar to Mr. Allison's, that the blue Welsh sett is very apt to wear slippery, so much so that we have removed a large quantity, and replaced them with granite; and we have arrived at the conclusion, except where durability is the only quality to consider, it is not to be recommended for a paving material.

The quarry belonging to Messrs. Darbyshire & Co. produces a material of a nature totally different from the blue Welsh stone.

Its colour is grey, and the texture of the material appears coarse enough to ensure a satisfactory foothold, and is of such a nature as to warrant confidence in its lasting power.

Your kind insertion of this letter will, while helping to ventilate the question, do justice to those quarries at Penmaenmawr which are not in blue stone. THOS. LONGDIN,

Borough Surveyor, Warrington.

OPEN SOIL-PIPES.

SIR,—In the *Builder*, January 13, 1878, appeared a letter from Mr. Norman Shaw, advocating the use of open instead of closed soil-pipes. In replying to the correspondence which followed in your journal, Mr. Shaw writes,—"I now come to the very serious question of frost raised by Mr. Roger Smith, and to this I regret to say I cannot give an answer based upon experience,—for hard frosts seem to be out of fashion now."

This year we have had frost enough to test the system, and it would be interesting to know what effect it has had. Perhaps Mr. Norman Shaw will kindly enlighten us upon the point. D. H.

DELAY IN BUILDING.

SIR,—An old proverb tells us that a "nod is as good as a wink," &c., and though, personally, I am not a far-seeing individual, at the same time I trust I am not altogether a "blind horse." If I may so far intrude on your valuable space, I trust you will allow me to call attention to what (possibly in my ignorance) I may term short-sightedness in many, if not nearly all, our "speculative" builders. Any one who is in the habit of visiting our London suburbs may have noticed the large number of houses (I beg pardon), "villas," standing oftentimes in rows of from six to twenty, or more, apparently completely finished, but in reality only in "carcass." The sashes may be in, and the front door hung, but on entering you will find the walls and partitions either not touched, or at least with only the first coat of plastering on. The reason of this is obvious to a practical man, for with weather as we have experienced it this winter plastering is virtually out of the question, at the same time there must surely be some alternative.

A friend of mine, who has been travelling on the Continent, told me only a few days ago that in Paris he was watching some builders at work on a row of new houses, when a sharp youngster, of not more than fourteen, satirically asked him if they could "make" houses as quickly in England. Naturally my friend felt somewhat indignant at such a slight on our national workmanship, but, like a wise man, pocketed his grievance and took the opportunity of going over the work, where he found that the plastering was proceeding at the same rate as the carcasses, one day only being allowed for a coat of plaster to set. Now, sir, although we have often heard that "they do things better in France," I cannot comprehend that our countrymen have not, up to the present time, brought their knowledge and experience into use to save not only time, but, as a necessary consequence, money, by completing contracts or speculative works in perhaps half the time now wasted on them.

In conclusion, may I suggest that, if it is possible to improve on our present system, some of our leading firms should test the question, as in the present critical situation of business, especially in the building trades and others connected with it, anything that may tend to remedy any defects and to allow of buildings being completed more quickly, would confer a favour on employers and employed, and could not injure the interests of that branch of the trade who are so much at the mercy of the weather, viz., the

PLASTERER.

PARTY-WALL QUESTIONS.

SIR,—I read with interest the article relating to party-walls, but I have had matters connected with this vexed question which have never been settled by surveyors and owners to my satisfaction. I will venture to mention them. I have bought freehold land, and when I want to build entirely on my own land I must have footings or foundations which are wider than the party-wall. I want to build, say, a 14-in. wall. Now, if I lay the first course with three bricks wide, and intend the upper or the party wall to form my boundary, my footings must project 7 in. on the land adjoining. Now, what I should like to know is, can an adjoining owner of land prevent any one laying the projecting foundation-courses on his land? If so, then there would be a 7-in space open up all the height of the party-wall; and if my neighbour observes this same rule, to keep the footings on his own boundary, then he loses 7 in. outside his party-wall, making a 14-in. space to remain for no purpose or benefit as long as the two houses stand. I hope I have made myself clear, and shall be favoured by some enlightenment in your much-prized paper. I may mention another matter. I sold a freehold house, with a figured plan on the deed, which made the centre of the party-wall the boundary. I held the original assignment, which left me the remainder of my land, viz., about 7 in. wide, and the length of the house, which was all I had left of the land, contemplating taking the adjoining land, and then using the wall for my own use, free of any molestation: but some other builder built on the land, and the owner of the house I sold took a consideration from the builder for the use of his party-wall, claiming it as his; but I referred him to his deed and mine, which showed the 7-in. slip of land, with half the party-wall still remaining on my deed: but, to save a bother, I took about one-half the value of the wall in settlement. Now, these are nice and exact questions; and if you can throw light upon the matter as regards the law or rule in these questions in your valuable paper, I and many others will be interested. I may say I had no clause relating to my retaining the party-wall in the contract for sale. ROBERT AMERY.

HEREFORD.

The Sewage Question.—The case of Lloyd *v.* The Corporation of Hereford was before the County Court judge on the 14th ult.; but was not proceeded with, inasmuch as the defendants had agreed to suspend the draining of sewage into the Wye, or in default to pay plaintiff 5*l.* a day during such default.

A Joint Railway Station.—The *Hereford Times* says that the three railway companies running into Hereford,—the Great Western, the Midland, and the London and North-Western,—have come to a final agreement for the erection of a joint station at Hereford, on the Barton site. The cost of the station is estimated at between 50,000*l.* and 60,000*l.*

CHURCH-BUILDING NEWS.

Ringshall.—Ringshall Church, Suffolk, has just been re-opened, after restoration under the direction of Mr. R. M. Phipson, architect. The church, which is dedicated to St. Catherine, consists of nave, chancel, and west tower. The walls are Early English work, and Mr. Phipson fixes the date at from 1270 to 1300. One or two single-light Early English windows remain, but there are Decorated and Perpendicular windows which are insertions of later times. The east window is in the Decorated style, and there are three windows in the Perpendicular style in the chancel. The nave and chancel walls present a singular appearance externally, as they have a considerable "batter" from the foundation to the eaves. This has engendered a suspicion with some people that the walls are giving out, owing to some defect in the foundations. Mr. Phipson pronounces this idea a mistake, the "batter" of the walls being only a method of the old builders of reducing the thickness of the walls as they got higher. The tower is large, massive, and very plain, of the latter part of the thirteenth century. The walls are nearly 5 ft. thick. A plain Early English arch, the mouldings of which die against the square piers, connects the church with the tower. The roof of the nave is the original tie-beam and king-post roof of the thirteenth century. The chancel has a hammer-beam roof, which dates from the fifteenth century. In the restoration which has just been finished, the efforts of the architect have been directed to the preservation of all the old work of the church. The restorers of a century since did not deal so lightly or reverently with the old churches. They generally made a clean sweep, and they appear to have done so at Ringshall. Among the new works we note that the south-east window in the chancel has been filled with stained glass by Messrs. Clayton & Bell. The total cost of the works has been about 850*l.*

Burnham Ulph.—The chancel of the church here has recently been undergoing repair and restoration, under the direction of Mr. R. M. Phipson, architect, Norwich. The east window, a three-light Early Perpendicular insertion, the tracery of which was partly blocked up by the plaster ceiling in the repairs which took place about half a century ago, has been thoroughly restored and glazed with Hartley's cathedral glass of light blue tint, as has also the single lancet light on the north side. No remains, externally, of the shape of the two south windows were to be seen, every vestige of quoin, cill, arch, &c., having disappeared, and modern insertions having been substituted; but beneath the floors of the old pews the workmen afterwards discovered the remains of the old stone lancet windows. A new steep-pitched roof of pitch pine, sized and varnished, has been put on. It is intended to put in new benches (the floor for which is already down). The contract was taken and carried out by Mr. A. Beaver.

Bristol.—A Vestry meeting of the parish of St. George's, Bristol, was held on the 23rd ult., when the plans prepared by Mr. Philip E. Masey, architect, London, for re-building the church (recently destroyed by fire) were approved, and it was resolved to apply for a faculty. Mr. Masey, in his report accompanying the plans, makes the following among other recommendations:—"That the nave arcade (which is seriously dilapidated) and clearstory be taken down and rebuilt, the same windows being used again. That the upper stage of the tower be taken down and rebuilt, and as it is contemplated to have a peal of bells, with the four old windows I should couple other four, to give freer egress to the sound. As ready access is required to the ringing-loft, the bell-stage, and top of tower, it is needed to have a staircase turret, which I purpose adding at the north-west corner. This feature will much improve also the appearance of the tower. From the space necessarily taken up by the organ, an extension of the vestry is absolutely needed. I purpose extending the wall to have a free area inside of 17 ft. by 16 ft., and to construct a heating-chamber below. Without this latter, and proper apparatus there can be no effectual warming of the building. As I hear the west gallery is not needed, the best thing I can advise with respect to the tower is to open out the archway, and to make of the space a baptistery,—in my opinion, a very advantageous arrangement. On account of economy, cleanliness, convenience, and safety from fire, as well as for æsthetic reasons, I recommend that the whole church be paved with tiles and seated with chairs. All roofs will, of course, be required to be new."

Tewkesbury.—At a recent meeting of the Tewkesbury abbey Church Restoration Committee, Sir E. Lechmere in the chair, Tuesday, Sept. 23rd, was fixed as the date of re-opening the abbey, provided it was not found to clash with the Hereford or Birmingham Musical Festivals. On the recommendation of Mr. J. Oldrid Scott, it was resolved that the organ be permanently erected upon a screen in the north transept, and an estimate was agreed to be obtained from Mr. Willis. Mr. Scott was instructed to prepare plans of the organ-screen and choir-stalls. The Vicar read a letter from Mr. Gambier Parry respecting the colouring of the bosses in the nave, in which the writer suggested that if the committee decided to carry out any colouring at all it should be done with extreme simplicity. It was resolved that the bosses in the nave should have some relief by colouring, and that the Vicar be requested to ask Mr. Parry to colour the first bay, or first and second bays, on the western side of the hoarding, in the way suggested in his letter, as a specimen of the way in which the whole should be done.

Diocese of Lichfield.—The annual meeting of the Lichfield Diocesan Church-Building Society was held recently. From the report, it appeared that the grants voted by the committee during 1878 had amounted to 3,318*l.* 6*s.* 8*d.*, including contributions towards the following items:—Building four temporary churches, containing 694 sittings, all free, 231*l.*; enlarging eight existing churches, whereby 645 sittings, all free and unappropriated, had been gained, 480*l.*; building one parsonage-house, securing a site for another house, and an additional grant towards a third, 326*l.* The committee called attention to a notice, issued at the suggestion of the society's surveyor, to the effect that in all cases of application for aid towards building, no existing fabric is to be removed, and no work begun before the plans and specifications have been approved by the general committee.

Sunderland.—The new church of St. Stephen, Ayres Quay, which was erected last year from designs by Messrs. Austin, Johnson, & Hicks, architects, of Newcastle, has just been consecrated. The church, which is built of brick, with stone dressings to windows, &c., consists of a large nave and chancel without aisles, and has a school-room and vestry underneath the chancel. The roof, which is very high-pitched, is covered with flat red tiles, and the long level ridge is broken by a bell-turret above the chancel arch, of open woodwork, surmounted by a spire covered with lead. Seats are supplied for about 500. The contractors for the masons' work were Messrs. W. Scott & Son, of Sunderland; and the whole of the woodwork, including an octagonal pulpit, lectern, and altar-rail of carved wainscot, and seats of pitch-pine, are by Mr. F. Caldcleugh, of Durham.

DISSENTING CHURCH BUILDING NEWS.

Keighley.—The foundation-stone of a new Baptist Chapel at Slack-lane, near Keighley, has been laid. Mr. John Judson is the architect, and the cost will be 3,000*l.*

Failsworth.—The new Unitarian chapel at Dob-lane, Failsworth, near Manchester, was opened for public worship on the 22nd ult. The building is Gothic, of the Geometric style. The principal front faces Oldham-road, which is south. At the west end is a four-light window, filled with stained glass by Messrs. Edmundson, of Manchester, presented by the Misses Taylor, in memory of their father. Above this window is a bell-turret, in which is placed a richly-toned bell, the gift of Mr. James Hopgood, London. The east gable is filled with two two-light windows, and at the end is the pulpit, over which is a carved canopy. The walls to the right and left are filled with arcading, the panels to be decorated in diaper and stencil work. In front of the pulpit is a carved communion-table. The choir-stalls are situated right and left of the pulpit, and the organ-chamber is in an arched recess at the north-east corner. The seating is pitch-pine, open, with carved bench-ends. The building is heated by hot water, on Wagstaffe's patent, and lighted by four coronæ, suspended from the roof, and two standards, manufactured by Ogden & Co., Manchester. The roof is part open, with curved braces springing from stone shafts, with foliated capitals to the under-side of the collars. Upon the whole the building has a neat and pleasing effect. The works have been carried out by Mr. David Adams, of Harpurhey. Messrs. Adams & Son, of Manchester, were the architects.

Armagh.—The new Presbyterian Church in Armagh is nearly completed. It occupies a site at the lower corner of Melbourne-terrace, facing the Mall, and is being erected from the designs of Messrs. Young & Mackenzie, architects, Belfast. The contract for the work is being carried out by Messrs. James & Jacob Guiler. The church consists of nave, aisles, and lofty tower and spire at the north-west angle of the building. The main front faces towards the Mall. The principal material used is Armagh marble, but the dressings are of Dungannon stone. The style is Decorated. There is a great deal of carved work upon the building, and this has been executed by Mr. Harry Hems. Mr. Rhind is the clerk of works.

SCHOOL BUILDING NEWS.

Eccleston.—A new school and master's house have recently been erected at Eccleston, near Chester, at the cost of the Duke of Westminster. The whole of the walls are of red sandstone, and the roofs are tiled. The windows of the school have a Gothic character, with stone tracery, and are filled with ornamental lead glazing. The gables and the upper part of the walls of the house are of black and white timber framing. The most striking feature outside is a lofty stone bell-turret, which is carried up one angle of the school, and contains a circular stone staircase. Internally the walls are lined with buff bricks, with a dado of red glazed bricks. The new school, together with several others in the neighbourhood built at the cost of the duke, has been erected from the designs of Mr. John Douglas, architect, Chester.

Coxford.—A new school-church has been opened at Coxford, near Southampton. It has been built at the sole cost of Mr. Andrew Barlow, the land being given by Mr. William Duke. The work has been carried out by Mr. J. W. Rowland, from the designs and under the superintendence of the architect, Mr. W. H. Mitchell. The school-room, in which it is also intended to hold divine service for the adult population, is 36 ft. by 24 ft. A cornice of Pether's ornamental bricks and decorated glazed tiles is carried along each side wall under the roof-plate, and a set of subject-tiles representing "The Parables of Scripture" is introduced into the east wall. The room is heated by one of Peirce's hot-air fire-lump stoves, and ventilated by vertical flues in walls. Externally the building is of dark red brick, pointed with black mortar, having moulded brick cornices to eaves and gables. The front has a five-light window with equilateral pointed arches, and brick splayed and moulded mullions, the gable over being surmounted by a bell-turret.

Clee Hills.—New Wesleyan day and Sunday schools at Clee Hills, between Ludlow and Cleobury, on the borders of Herefordshire, have been opened. The school will accommodate 250 scholars. The total cost, including the purchase of an adjoining site for a new chapel, is nearly 1,000*l.* The building was designed by Mr. J. Yates, foreman of the granite works, and carried out under his superintendence.

STAINED GLASS.

Huntingdon.—The only window in the chancel of All Saints' Church, Huntingdon, till lately remaining unfilled with stained glass, has been completed. The subject selected is "The Last Supper." Our Lord, represented in the act of blessing the bread, occupies the centre light, while six of the Apostles are on each side; through the window is seen a distant view of Jerusalem by night. The artist is Mr. A. Dixon, of London.

Sheffield.—A new window in memory of the late Mr. John Denton has been erected in All Saints' Church, Sheffield. It has been designed and executed by Mr. J. Clutterbuck, of Stratford. It comprises three lights, the central one containing a representation of St. Peter, and the side lights those of St. James and St. John. Underneath these are illustrations of "The Good Shepherd," carrying lambs in his arms; "The Lord's Ascension"; and another Gospel sketch.

MASTERS AND MEN.

York.—The notice of a reduction of wages received at the end of November by the masons, bricklayers, joiners, labourers, and others concerned in the building trade in York is now taking effect, and the men, in view of the widespread depression, appear quietly to accept the inevitable. The notice of a reduction of ½d. per hour in the masons' wages expired on the 18th ult., and the terms had been received without opposition.

Huddersfield.—The strike in the engineering trade at Huddersfield against an extension of the working-hours continues, and 107 men are on strike.

Alloa.—The workmen at the Alloa Pottery (Messrs. Bailey's) resumed work on the 27th ult. at a reduction of 10 per cent. from former rates. This is the second reduction of 10 per cent. made upon the potters' wages at Alloa during the last eight months.

Wolverhampton.—Messrs. Fell & Co. and Messrs. A. Aldridge & Co., brassfounders, Wolverhampton, have given notice of 15 per cent. reduction in wages, by taking off a bonus to that amount which was granted during the period of good trade in 1873. The men have turned out on strike. Their action is supported by the Birmingham executive of the Brassfounders' National Association, and the places of the strike hands have been filled up by non-unionists.

Hanley.—At a meeting of the annual conference of delegates on Wednesday, representing the Societies of House Painters and Decorators of the Trade Alliance of the United Kingdom at Hanley, it was stated by the president, Mr. Sanley, the greatest reduction given notice of in any district connected with the Alliance was a penny per hour. The conference resolved that the executive should be empowered to deal with the dispute.

Industrial Dwellings and the Artisans' Dwellings Act.—The Metropolitan Board of Works have received a letter from the Home Office, transmitting copy of a letter from Sir Sydney Waterlow, chairman of the Improved Industrial Dwellings Company, explaining the reasons why the company have not tendered for the purchase of the land advertised to be sold for the purposes of the Whitechapel and Limehouse Scheme under the Artisans' Dwellings Act, 1875, and stating that the Secretary of State is confident that the Board, from their desire to give effect to the Act in a satisfactory manner with as much expedition as possible, will be willing to modify the form of tender already adopted for the purpose of removing difficulties and attracting tenders; that he is anxious that building operations should be commenced early this spring, and suggesting a new form of advertisement for tenders of a much more simple and elastic character.

RUINOUS NEW HOUSES.

Metropolitan Building Act.—At the Greenwich Police Court, Mr. Champion, builder, of Lewisham, appeared to an adjourned summons, before Mr. Balguy, at the instance of the Metropolitan Board of Works, to show cause why an order should not be made upon him to take down three of six houses constructed by him in Hither-green-lane, in December last.

Mr. Badger, the district surveyor for the Lewisham division, and Mr. Tabberer, surveyor for the Greenwich division, gave evidence, from which it appeared that a block of six houses had been put up in six weeks before Christmas, and that Mr. Badger had examined the foreman conducting the building as to the mortar that was being used. On the 21st and 22nd of December, owing to the frost and thaw, the corner house and next house fell, and twenty-three hours afterwards a third house fell. The mortar used was said to feel like snuff when pinched between the thumb and finger.

Mr. Carttar, for the defence, observed that it would be ruin if an order was issued for defendant to pull down the three houses, and called the managing man who had done the work on the structure, and also architects, who gave evidence that the specimens of mortar produced were not such as would lead them to give a certificate for "contract work," but that it was pretty good mortar for "speculative building," and each also said, after inspecting three houses, there were many more worse built than these, and that there was no necessity to pull them down.

Mr. Balguy said it was sought to prove that Mr. Badger and the other district surveyor had made too much of the danger attending the structures. The mortar used appeared to be like road dust, and he should make the order asked for, the work to be done in fourteen days.

A NOTE.

A concurrence that never took place before and that can never by any possibility be found again, would seem to be worth a passing note, though in itself of no consequence, and this it is:—the number of our present issue is that of this year of grace, 1879. Simple enough and unimportant; but it serves to bring to our mind in a striking way the marvellous passage of time; and, filling us with recollections and thoughts, would lead us to take the gentle reader into confidence at some length, as was our custom in earlier and more "gushing" days. But the opportunity is not present; the idea has come too late; the paper is made up, and for every line we add to this some other line must be displaced. One remark, however, forces itself upon us, and will have expression, egotistical though it may be deemed. Of those 1879 weekly numbers which constitute the present life of the *Builder*, one thousand seven hundred and eighty-one have been produced and issued under the direct personal care and supervision of the present conductor. It is not a gladdening recollection, this passage of unrecallable time,—this progress towards the End,—but it is something to be able to say, with hand upon heart,—yes, even with lips to Bible,—that during that time the endeavour has been to perform faithfully, and with high aims, the functions of such a position; that self-seeking has never been a motive; that pain has never been willingly given; that while we have often stepped out of the way to assist budding talent or back up struggling desert, we have never knowingly sought to gratify a personal pique. The constant endeavour has been to encourage right feelings, to afford useful information, and to effect such an amount of good as our most earnest, if humble, efforts could compass.

George Godwin.

Mr. S. C. Hall, F.S.A., will, we regret to learn from the current number of *Social Notes* (the 49th), retire from the editorship of that periodical with the completion of its 52nd weekly issue. He incidentally mentions that the reasons for his retirement have no reference to the recent case of Pepperell *v.* The Marquis of Townshend. Mr. Hall thanks the authors and artists who have aided him in the work, and says that the withdrawal of his name from the title-page must be held as assurance that he ceases entirely to control or influence the publication.

The Grand Hotel, Charing-cross.—Messrs. Chas. Williams & Co. are the contractors for the ornamental iron roof over the *Salle-à-manger* at the above buildings.

Miscellanea.

A New Railway in the West.—The new line from Okehampton to Holsworthy, opened on the 20th ult., is practically an extension of the London and South-Western system, though constructed by the Devon and Cornwall Company. The line has cost 200,000*l.* Messrs. Galbraith & Church were the engineers, Mr. R. T. Relf was the contractor, and Mr. Henry Drew the surveyor. The line seems well constructed throughout. It branches off from the main line three miles to the south-west of Okehampton, at a point called Meldon Junction, and passes through the parishes of Okehampton, Ashbury, Beaworthy, Bratton Clovelly, Northlew, Halwell, Black Torrington, Ashwater, Bradford, Cookbury, Hollacombe, and reaches the terminus at Holsworthy after traversing seventeen miles and three-quarters. The land for making seven miles of the railway was given by four owners, viz., Archdeacon Woollcombe, Mr. G. W. Medley, Mr. W. J. Harris, and Earl Stanhope; and so happily were the negotiations with other owners conducted that there has not been a single dispute to refer to arbitration. The gradients of this extension are about the same as on the main line, the worst being 1 in 80. Running as it does along a ridge of country the embankments are not excessive, the deepest and heaviest being that at the Meldon Junction, about half a mile long, and 53 ft. deep. Taken altogether, the earthworks represent 915,000 cubic yards. The deepest cutting, 50 ft., follows the work at Meldon. The cuttings are chiefly through hard shale, and number forty-two, varying from 200 to 173,000 cubic yards. Thirty-two public and occupation road bridges have had to be built. As good stone could not be obtained near the line's commencement, the first six bridges are faced with brickwork; the rest are composed of stone from the quarries near Beaworthy and Halwell-road Station. The total amount of masonry in bridges and culverts is nearly 17,000 cubic yards. The most formidable work is the viaduct at Holsworthy, built entirely of masonry, consisting of eight arches of 50 ft. span each, 84 ft. in height, and it is 463 ft. in length. The stone for this structure was procured from quarries on the property of Mr. W. J. Harris, near the Beaworthy and Halwell-road Station, and the string-courses, caps, and copings are of granite from Dartmoor.

A Remarkable Book.—On the 30th ult., at Dublin, there was commenced the sale, by auction, of the library (10,000 volumes) of Mr. Adolphus Cooke. One of the books for sale (says the *Freeman's Journal*) has a special and melancholy interest for Irish readers. It is the famous "Mexican Antiquities," by Lord Kingsborough. Lord Kingsborough was the eldest son of the Earl of Kingston, and was born in 1795. In the early part of the present century he travelled in Mexico, and conceived the idea of devoting his life to the publication of a work on the antiquities of that country. The result was nine magnificent volumes, published at a price of 235*l.* 10s., and replete with illustrations unique in their splendour, their costliness, and their truth to nature. Prescott, the great historian of Mexico, wrote of this work that it was a "munificent undertaking, which no Government probably would, and few individuals could, have executed, which entitled its author to the lasting gratitude of every friend of science." Lord Kingsborough spent on the work a sum variously stated at from 32,000*l.* to 60,000*l.*, and devoted to it all his time, his fortune, and, in the end, his life. When his resources were exhausted, he was arrested in Dublin at the suit of the papermaker, and confined in the Marshalsea, where he contracted a malignant fever, and died in a few weeks. Had the unhappy victim to enthusiasm lived a few months longer, he would have inherited the title of Earl of Kingston and an income of 40,000*l.* a year.

Cheap Papier Mache.—We have received from the Papier Mâché Company (Limited) specimens of a new material in *papier mâché*, which the company have, after a series of experiments, succeeded in bringing to perfection. They are now enabled to supply all their unperforated enrichment mouldings at exactly half their original price. These enrichments are very light and strong, and ought to supersede most of the coarse, common plaster work used for "adornments" by speculative builders of small houses in the suburbs.

Local Expenditure on Public Works.—It is urged that, however desirable an improvement may be, these days of depressed trade and unemployed labour is not the time to launch into corporate expenditure. The *Wrexham Advertiser* says on this:—"To this argument there is, in our opinion, a very cogent answer, come from whom it may. Expenditure upon town improvements, whether they be street, drainage, or building, means mainly an expenditure on labour. Stonework, brickwork, drainage work, imply that the bulk of the materials used are made available and valuable by labour, the bulk of which is local. And then the actual carrying out of the work must be certainly by local labour. Thus, therefore, the local labour market is at once improved by the process, and men are placed in a position to earn a livelihood. The money thus spent in wages percolates into the tills of the tradesmen, and assists them in tiding over the bad times. Moreover, labour and materials are cheaper at such times than under ordinary circumstances. The expenditure of 1,000*l.* can be secured in one year for a yearly payment of about 55*l.*, extending over thirty years. Such an expenditure, when wisely incurred, not only benefits the town during its progress, but opens up new sources of revenue afterwards, that, in all probability, will more than recoup the original outlay. Abundant facts exist in proof of the truth of this conclusion, and the advocates of corporate works need only prove the wisdom and necessity of such undertakings."

Fall of a Railway Bridge.—On Monday morning an accident occurred at a bridge over the main line of the Manchester, Sheffield, and Lincolnshire Railway, in the parish of Melton Ross, known as Chalk-hill-bridge, which was near some lime-kilns between Brocklesby and Barnetby Stations, and formed a connexion of the high road between Grimsby and Brigg. For some time the bridge had evidently been in a dilapidated condition, the heavy frosts of the winter, by dislodging the foundations and brickwork, having increased the danger. The directors of the company, therefore, decided upon its removal, and had diverted the highway over the railway by the construction of a level crossing at a short distance from the bridge. To avoid interference with the ordinary week-day traffic, and also the risk of rubbish falling upon passenger trains, Sunday night was fixed upon for the removal of the shattered structure, and a number of men were employed on the work under the superintendence of Mr. Fisher, the resident engineer of the company at Grimsby. No fewer than seventeen shots of blasting-powder were used without producing any perceptible effect. After they had been fired it was decided to pull down the bridge by piecemeal, and when a small portion of the brickwork had been removed,—not less than half the key of the arch,—the whole structure fell without a moment's warning, killing four men and injuring many others.

Burning of the Theatre Royal, Glasgow. The Glasgow Theatre Royal, one of the largest and best equipped theatres in the kingdom, was, early on Sunday morning last, destroyed by fire. At the close of Saturday night's performance the theatre doors were all locked, Mr. Knapp, the manager, and a few gentlemen remaining inside. Shortly after midnight Mr. Knapp heard a rushing sound, as if a pipe had burst, and on looking into the theatre he found nearly the whole house in flames, and the only door which he and those with him had the means of opening could not be reached for the flames. They tried to burst first one door, then another, but failed, and it was only after drawing the attention of people outside, and having a door forcibly opened, that the party were able to escape from the fire which was fast approaching them. The theatre was erected in 1867 at a cost of 30,000*l.*

Settling with a Contractor.—The Commune of St. Briac, not far from St. Malo, has just been deeply moved. It appears that M. Collin de la Contrie, an officer in the Territorial Army, and one of the leading inhabitants of the locality, had engaged a Monsieur Hus, a contractor, to build a house for him. A quarrel having arisen between the two as to certain details of construction, they set to fighting. What exactly followed is not known, as there was no witness of the struggle; but M. Hus was found dead on the ground with his head almost cloven in two with a chopper, and M. Collin insensible by his side with his jaw smashed.

Colonial Woods.—Messrs. Coltart, Smith, & Co., in their annual Wood Circular, say, as to *yellow pine timber*:—"The import during the past year, although only a little over one-third of that of 1877, has even been more than what was required, as the consumption was on so small a scale that there is still a heavy stock left, viz., 1,131,000 ft. This is 36 per cent. less than that of last year, but with the present small demand is more than sufficient for the next six months' consumption. Freights opened at 24s. to 25s. per load, but, as in the previous year, they again declined, touching 22s. 6d. per load in the month of August; they, however, immediately afterwards rose to 27s. per load, which had the effect of stopping further chartering and curtailing the import considerably in the fall. The sales of Quebec square pine have been, in the early part of the year, at 1s. 3½d. per foot for small wood, and 1s. 10d. per foot for 17½-in. good fair average, but latterly sales have been made at 2s. to 2s. 0½d. per foot for prime square, at 2s. 1d. per foot for Waney board, and at 1s. 8d. to 1s. 10s. per foot for two parcels of St. John's square pine. *Red Pine*:—The import has been only 61,000 ft., against 72,000 ft. last year, the bulk of which having consisted of large sizes, and unusually good quality, has met with ready sale for special purposes, at fairly remunerative prices; but this article must become less saleable than formerly, in consequence of pitch pine being cheaper, cleaner, and better manufactured, especially in sawn-sided wood. The latest sale was of a prime parcel per *John Abbott*, which realised from 1s. 4½d. to 1s. 8d. per foot, averaging 1s. 5½d. per foot. The present stock consists of 39,000 ft."

Drainage of Hanwell.—The inquiry before the local Government inspector, Mr. Thornhill Harrison, C.E., as to the drainage of this town, terminated rather abruptly last week. The opponents did not deny that the town was in urgent need of improved sewerage arrangements; but on this, as on the former occasions, opposed the particular scheme put forward as a mischievous absurdity which would carry the sewers up stream instead of down, against the natural inclination of the ground, and through the higher portion of the town, where property was most valuable. In this way deep tunnelling and very flat levels would be rendered necessary. Mr. Harrison said he should now look at the matter for himself, without reference to what had gone before, and upon the second day of the inquiry expressed his opinion in decided terms, that a sewer, having for three-quarters of a mile so slight a fall as that proposed, would constitute a danger to the health of the town of Hanwell, and he would not take the responsibility of recommending the work unless it were shown to his satisfaction that no other scheme was practicable. The promoters said that, in the face of the declaration made by the inspector, it would be useless for them to proceed, and they accordingly withdrew their application. Mr. Mansergh, Mr. Henry Law, Mr. Rogers Field, Mr. Baldwin Latham, &c., came down specially to give evidence. Mr. Harrison suggested to the parties that, having fought the matter out, it would be very desirable if they would now take united action in support of some really effective scheme.

The Non-Professional Study of Architecture and Ecclesiology.—As having some connexion with, if not entirely arising out of, the *Builder's* advocacy of the non-professional study of architecture, we note with much interest that on Thursday evening last, at a meeting held at the Chapter House in St. Paul's Churchyard, a new society, to be called "The St. Paul's Ecclesiological Society," was formally constituted, for the purpose of promoting among young men engaged in the City the non-professional study of architecture and ecclesiology. It is proposed to make occasional visits to churches and other buildings, under the guidance of architects, and to hold meetings at which lectures will be given, and papers on architectural, ecclesiological, and cognate subjects read and discussed. The annual subscription has been fixed at a scarcely more than nominal sum. The chair was taken by the Rev. H. C. Shuttleworth, M.A., Minor Canon of St. Paul's, and among the architects present were Messrs. J. P. Seddon, G. H. Birch, and Bowes A. Paice. Rules were discussed and tentatively agreed to. It is proposed to ask the Dean of St. Paul's to be the president of the society. Mr. R. Howard Wall is acting as hon. sec. *pro tem.*

The Institution of Civil Engineers.—At the meetings on the 14th and 21st of January a paper was read "On the best Methods of Railway Construction for the Development of New Countries, as illustrated by the Railway Systems of South Australia," by Mr. R. C. Patterson, C.E. It was observed that the development of new countries by means of railways was the most important function of Colonial Governments. In the case of the Australian Colonies, especially in Victoria, there had been an unwillingness to take advantage of the experience and practice of older communities; and the railway policy had been the principal feature characterising opposing parties in the Legislature. Prior to 1867, a gauge of 5 ft. 3 in. had been adopted in South Australia, the lines costing considerably more than 10,000*l.* a mile, and the permanent way being of a character entirely unsuited to the climate; but in that year, owing to popular agitation, a cheaper system was introduced. The existing gauge was extended, but of a much lighter type; and the 3 ft. 6 in. gauge was introduced for districts separated from the broad-gauge lines. An extension of the main line northwards from Adelaide for seventy miles on the broad gauge had cost 5,247*l.* per mile. A description of this line, which was of an easy character, was given. The author referred to the evils of the break of gauge. Queensland had adopted a gauge of 3 ft. 6 in.; New South Wales, a gauge of 4 ft. 8½ in.; Victoria, one of 5 ft. 3 in.; and South Australia had gauges of both extremes.

The Midland Land and Investment Corporation, Limited.—At the annual meeting of the shareholders of the Midland Land and Investment Corporation, held at the Queen's Hotel, Birmingham, Mr. F. S. Bolton (chairman of the board of directors), presiding, said, in moving the adoption of the report, that the business of the company was entirely confined to the buying and developing of estates, the making of advances on freehold and leasehold property; and that the company's chief aim was not to gain a high interest, but to create good ground-rents, and make their profits on the sale of such ground-rents. Looking at the long-continued stagnation of trade, the annual report could not be otherwise than acceptable. On this occasion they did not propose to increase the dividend or to give a bonus, but to declare a dividend of 15 per cent., and to carry 8,000*l.* over as a surplus reserve fund. The report was then adopted. In response to the appeal addressed to the large landowners of the district, 100*l.* were voted to the Mayor's Relief Fund.

Engraving by Electricity.—According to *L'Électricité*, means have been found to engrave upon stone or metal by the effect of a voltaic arc produced from the point of a pencil. It is said that by these means, an artist can himself reproduce, immediately and without the intervention of any skilled workman or mechanic, the most delicate and complicated designs. If this statement can be confirmed, adds the *Electrician*, it will be of no small interest to the proprietors of illustrated papers.

Manchester City Surveyorship.—Mr. John Allison was on Wednesday appointed to the office of City Surveyor of Manchester, at a salary of 1,000*l.* per annum. There were forty-nine candidates.

The National Portrait Gallery.—The Prime Minister has appointed Sir Richard Wallace to the vacant trusteeship of the National Portrait Gallery.

TENDERS

For alterations, to 64 and 66, High-street, Kingsland. Messrs. Waymouth & Son, architects:—

Sheffield & Prebble	£317 0 0
Sawyer	290 0 0
Shurmur	269 0 0

For the erection of St. Peter's Church, Upper Holloway. Mr. C. L. Luck, architect. Quantities by Messrs. Northcroft, Son, & Neighbour:—

Wood, Brothers	£8,160 0 0
Gullett	8,115 0 0
Vare	8,000 0 0
Higgs & Hill	7,934 0 0
Patrick	7,971 0 0
Wall, Brothers	7,600 0 0
Aitchison & Walker	7,439 0 0
Marsland	7,235 0 0
Stephenson	7,161 0 0
Manley	6,999 0 0
Sargeant	6,936 0 0
Hook & Oldrey	6,738 0 0

For the construction of sewers in Priory-road, Alexandra-road, and Kilburn-vale, Kilburn, for the Metropolitan Board of Works. Sir Joseph Bazalgette, engineer:—

Williams, Son, & Wallington	£8,850 0 0
Dickinson	8,469 0 0
Cardus	8,117 0 0
Crockett	7,300 0 0
Webster	6,933 0 0
Maxwell	6,800 0 0
Stevens & Co.	6,370 0 0
Bell	6,295 0 0
Young & Co.	6,140 0 0
Watts	6,100 0 0
Hook & Oldrey	5,999 0 0
Nowell & Robson	5,990 0 0
Mowlem & Co.	5,400 0 0
Killingback	4,850 0 0

For an additional story to the Sussex Hotel, Cliftonville, Brighton. Mr. Fred. W. Hyde, architect. Quantities supplied:—

Cheeseman	£1,469 0 0
Lockyer	1,447 0 0
Garrett	1,380 0 0
Botting	1,330 0 0
Parsons & Son	1,275 0 0
Patching & Son	1,186 0 0

For additional story to 33 and 34, St. Paul's Churchyard and 12, Old Change, for Mr. Coe. Mr. B. Tabberer, architect:—

Crabb	£730 0 0
Saunders	630 0 0
Marks	590 0 0
Cohen	570 0 0
Johnson & Co. (accepted)	550 0 0

For completion of eight houses at Roupell Park. Mr. F. S. Archer, architect:—

Coombs	£3,337 0 0
Johnson & Co.	3,071 0 0
Watson & Dermott	2,719 0 0

For alterations and additions, Little Sutton, Chiswick. Mr. Wm. Emerson, architect:—

Haward, Brothers	£5,404 0 0
Lascelles	5,331 0 0
Colls	5,251 0 0
Adamson & Son (accepted)	4,121 0 0

For alterations, &c., at 222, 223, and 224, Upper-street, Islington, for Mr. T. R. Roberts. Mr. H. Ough, architect:—

Sage	£1,550 0 0
Reid	1,179 10 0
Coombes & Son	1,154 0 0
Shapley	1,080 0 0
Emery	1,067 0 0
Palmer	899 0 0

For repairs and decorations at Haling Park, Croydon, for Mr. James Watney. Mr. H. J. Newton, architect:—

Grimwood & Sons	£945 0 0
Godden	813 0 0
Lamble (accepted)	793 0 0

For additions to schools, William-street, Hammersmith, for the London School Board. Mr. R. R. Hobson, architect. Quantities by Mr. J. Nicholls:—

Jerrard	£4,995 0 0
Rankin	4,988 0 0
Tyerman	4,938 0 0
Hook & Oldrey	4,923 0 0
Hobson	4,897 0 0
Scrivener & Co.	4,886 0 0
Thompson	4,840 0 0
Higgs & Hill	4,699 0 0
Shephard	4,669 0 0
Tongue	4,505 0 0

For alterations to the Mail Coach, Camomile-street, Bishopsgate-street, for Mr. J. Blyth:—

Grimwood & Son	£379 0 0
Carey	305 0 0
Hebb	275 0 0
Taylor & Parfitt (accepted)	269 0 0

For new kitchen, &c., at the Amersham Arms, New-cross-road, for Mr. W. Agate. Mr. W. T. Hunt, jun., architect:—

Thomas	£370 0 0
Redman	248 0 0
Holloway	239 0 0
Smith (accepted)	196 0 0

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